

Attachment 1

**2023 Final Tolls
Calculation Schedules**

TRANS MOUNTAIN
2023 Final Tolls calculation
Pursuant to the 2022 - 2023 Incentive Toll Settlement
TABLE OF CONTENTS

SCHEDULES		Page
<i>Schedule 1</i>	Calculation of Revenue Requirement	ITS - 2
<i>Schedule 2</i>	Calculation of Rate Base, Capital Cost Recovery, and Adjustment	ITS - 3
	2.1 Summary of Capital Additions by Major Categories	ITS - 5
	2.2 Calculation of 2023 Debt Rate	ITS - 6
<i>Schedule 3</i>	Summary of Fixed Costs and Trans Mountain Personnel Adjustment	ITS - 7
<i>Schedule 4</i>	Summary of Flow Through Costs and Adjustments	ITS - 8
	4.1 Summary of Power Transmission Volume and BC Energy Cost Savings	ITS - 9
	4.2 Calculation of the Petroleum Loss Allowance Percentages	ITS - 10
	4.3 Flood Deferral Account	ITS - 11
<i>Schedule 5</i>	Calculation of Operational Capacity Incentive Adjustment	ITS - 12
<i>Schedule 6</i>	Calculation of Transportation Revenue Adjustment	ITS - 14
<i>Schedule 7</i>	Calculation of Income Tax Provision and Adjustment	ITS - 15
	7.1 CCA for the Rate Base: (i) 2022; and (ii) Forecast for 2023	ITS - 16
<i>Schedule 8</i>	Summary of Non-Routine Adjustments	ITS - 17
	8.1 Calculation of the NRA for the Edmonton Terminalling Revenues	ITS - 18
	8.2 Westridge Dock Bid Premium Refunds	ITS - 19
	8.3 New Business Opportunities: Black Pines/DRA Cost Recovery	ITS - 21
<i>Schedule 9</i>	Calculation of 2022 Carrying Charge Rate	ITS - 22
CER COMPLIANCE REPORTING		
	CER 1 Income Statement	ITS - 23
	CER 2 Average Rate Base	ITS - 24
	CER 3 Throughput Details	ITS - 25
	CER 4 Annual Integrity Spending	ITS - 26
	CER 5 Firm Service Report	ITS - 27
	CER 6 Trans Mountain Expansion Project Bulk Oil Cargo Fee Due from Westridge Shippers	ITS - 28
	CER 7 Costs Recovered from Merchant Services at the Edmonton Terminal	ITS - 29
TOLL CALCULATIONS		
<i>TL Schedule 1</i>	Explanatory Notes for the Toll Design and Calculations	ITS - 30
<i>TL Schedule 2</i>	Summary of Forecast System Throughput Volumes	ITS - 33
<i>TL Schedule 3</i>	Revenue Comparison using Interim and Proposed Tolls	ITS - 35
<i>TL Schedule 4</i>	Summary of Proposed Tolls by Crude Type	ITS - 37
<i>TL Schedule 5</i>	Calculation of Proposed Mainline Tolls	ITS - 39
<i>TL Schedule 6</i>	Calculation of Proposed Westridge Marine Terminal Loading Charge	ITS - 40
<i>TL Schedule 7</i>	Calculation of Proposed Tankage Tolls	ITS - 41
<i>TL Schedule 8</i>	Calculation of Proposed Terminalling Tolls	
	8.1 Calculation of Proposed Terminalling Receipt Tolls	ITS - 42
	8.2 Calculation of Proposed Terminalling Delivery Tolls	ITS - 43
<i>TL Schedule 9</i>	Calculation of Proposed Separate Toll for the Westridge Dock Bid Premium Refund	ITS - 44

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 1
Calculation of Revenue Requirement
(\$000)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual ^[1]	2022 Variance	2023 Proposal ^[1]
1	A. Revenues for Annual Toll Change					
2	Capital Cost Recovery	[Schedule 2, Sheet 1, line 26]	108,076	108,500	424	118,242
3	Income Tax Provision	[Schedule 7, line 12]	9,629	13,630	4,000	9,457
4	Fixed Costs	[Schedule 3, line 11]	77,862	77,862	-	79,773
5	Flow Through Costs	[Schedule 4, line 10]	163,084	167,279	4,195	182,761
6	Flood Cost Deferral ^[2]	[Schedule 4.3, Negative of line 8]	(302)	(4,398)	(4,096)	(2,000)
7	Trans Mountain Personnel Adjustment ^[3]	[Schedule 3, line 12]	-	-	-	-
8	Transportation Revenue Adjustment	[Schedule 6, line 15]	-	398	398	-
9	Operational Capacity Incentive Adjustment	[Schedule 5, Sheet 1, line 17]	-	1,366	1,366	-
10	Summary of NRAs and Adjustments	[Schedule 8, line 8]	(952)	(6,891)	(5,939)	(867)
11	Black Pines/DRA (NBO Cost Recovery) ^[4]	[Schedule 8.3, Lline 4]	-	1,264	1,264	640
12	Total Revenues		357,398	359,010	1,612	388,007
13	Carrying Charges	[Schedule 9, Note 2]	(79)			(214)
14	Prior year adjustment ^[5]		25,504			1,612
15	Total Annual Revenue Requirement		382,823			389,404
16	B. Adjustment required for partial year Net Tolls					
17	Revenues collected from 2022 Interim Net Tolls ^[6]		(113,460)			
18	Revenues collected from 2023 Interim Net Tolls ^[6]					(135,945)
19	Revenues for Partial Year Net Tolls		269,364			253,459
20	C. Average change in Revenue Requirement	[(line 15: 2022 Approved ÷ 2021 of \$326,623K) - 1]	17.2%			
		[(line 15: 2023 Proposed ÷ 2022 Approved) - 1]				1.7%
21	Refund Westridge Dock Bid Premiums					
22	Separate Tariff Sur-credit	[Schedule 8.2, Sheet 1, line 9]	(79,401)	(79,019)		(66,857)
23	Additional refund to offset Pipeline Reclamation Surcharge	[Schedule 8.2, Sheet 1, line 10]	(12,617)	(12,829)		(12,673)
24	Additional refund to offset System Optimization Surcharge ^[7]	[Schedule 8.2, Sheet 1, line 11]	227	227		-
25	Total Separate Tariff Sur-credit		(91,792)	(91,621)		(79,530)
26	Average change in Tolls					
27	Without Westridge Dock Bid Premiums		8.8%			-1.6%
28	With Westridge Dock Bid Premiums		33.3%			-2.5%

Note(s):

- [1] The 2022 Actual are calculated pursuant to the 2022-2023 ITS and the 2023 Proposal conforms with the principles defined in the 2022-2023 ITS.
- [2] The Flood Deferral Account was applied for in 2022 Final Tolls and approved by Commission order TO-002-2022 (C18955-3).
- [3] Trans Mountain Personnel Adjustment is calculated pursuant to Section 11.5 of the 2022-2023 ITS.
- [4] In the 2023 Final Tolls filing, Trans Mountain proposes to establish a New Business Opportunities (NBO) account (Schedule 8.3) for recovery of incremental costs related to early in-service of Black Pines Pump Station and installation and injection of Drag Reducing Agent at Kingsvale Pump Station.
- [5] The 2022 Approved Prior year adjustment can be found in the 2022 Final Toll filing, Final Toll Schedules, Schedule 1, Line 13. CER filing ID: C18346.
- [6] Interim Toll amounts are the sum of Interim Net Tolls multiplied by deliveries identified for January through April.
- [7] The System Optimization Surcharge and offsetting Westridge Dock Premium Surcredit were approved by CER Order TO-004-2019. The System Optimization Surcharge is no longer applicable for the 2022 Tolling period. Order TO-005-2021 (C16319-3) approved the cancellation of the System Optimization Surcharge and offsetting Westridge Dock Premium Surcredit effective 1 December 2021.
- [8] All amounts shown on the schedules have been rounded when presented in thousands. As a result totals may not add.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

Schedule 2

Calculation of Rate Base, Capital Cost Recovery, and Adjustment

Sheet 1 of 2

(\$millions)

Line	Description	Capital Structure	Returns / Rates		2022	2022	2022	2023
			2022	2023	Approved	Actual	Variance	Proposal
1	Open Plant In Service Assets				1,767.0	1,767.0	-	1,864.7
2	Open Accumulated Depreciation				(786.5)	(786.5)	-	(836.9)
3	Total Open Net Plant ^[1]				980.5	980.5	-	1,027.8
4	Capital Additions to Rate Base as of							
5	1-Jan [Schedule 2.1, line 22]				1.0	11.3	10.3	18.6
6	31-Dec [Schedule 2.1, line 23]				51.6	90.3	38.6	36.9
7	<i>Additions without Westridge Marine Terminal</i>				52.4	101.5	49.0	55.5
8	<i>Westridge Marine Terminal</i>				0.2	0.1	(0.1)	-
9	Reportable Additions				52.6	101.6	48.9	55.5
10	Depreciation Expense ^{[2] [5]}							
11	31-Dec		2.41%	2.42%	(37.4)	(36.4)	1.1	(40.0)
12	Reportable Depreciation Expense				(37.4)	(36.4)	1.1	(40.0)
13	Retirements				-	(3.9)	(3.9)	-
14	Net Proceeds / (Costs) ^[6]				(0.5)	17.9	18.4	(2.4)
15	Close Plant In Service				1,819.6	1,864.7	45.1	1,920.2
16	Close Accumulated Depreciation				(823.5)	(836.9)	(13.5)	(874.5)
17	Total Close Net Plant				996.2	1,027.8	31.6	1,045.6
18	Average Plant In Service				988.8	1,009.8	20.9	1,046.0
19	Average Working Capital ^[3]				22.5	22.8	0.3	25.6
20	Net Rate Base				1,011.3	1,032.5	21.2	1,071.6
21	Return on Capital							
22	Equity	45%	9.50%	9.50%	43.2	44.1	0.9	45.8
23	Debt ^[4]	55%	4.93%	5.50%	27.4	28.0	0.6	32.4
24	Total Return on Capital		6.98%	7.30%	70.6	72.1	1.5	78.2
25	Depreciation Expense				37.4	36.4	(1.1)	40.0
26	Total Capital Cost Recovery				108.1	108.5		118.2
27	Capital Cost Recovery Variance						0.4	
28	Carrying Charges			[If line 27<0, line 27 * rate on Sch 9]			-	

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 2**

Calculation of Rate Base, Capital Cost Recovery, and Adjustment
Sheet 2 of 2

Note(s):

[1] Excluded assets: 1). Capital Cost Incentive (CCI) pursuant to CER Order TO-06-2006; and 2). System Optimization net rate base additions exceeding \$21 million.

[2] The 2022 Actual and 2023 Proposal for annual depreciation expense is based on the Depreciation Rates for rate-regulated assets in the 2019 Depreciation Study approved by CER Order TO-001-2020 (C05929) and the 2021 Depreciation Study approved by CER Order TO-004-2022 (C20741) respectively. Trans Mountain applies the most recently approved depreciation rates pursuant to Section 10.2 of the 2022-2023 ITS.

[3] Forecast Working Capital Provision:

	2022 Approved	2022 Actual	2022 Variance	2023 Proposal
Fixed & Flow Through Operating Expenses	241.5	245.6	4.1	263.2
Less Insurance	(9.3)	(10.3)	(1.0)	(14.2)
Plus Income Taxes Payable	7.3	10.3	3.0	7.1
Cash Cost of Service	<u>239.5</u>	<u>245.6</u>	<u>6.1</u>	<u>256.1</u>
Provision for Cash Requirement ^[ii]	9.8	10.1	0.3	10.5
Average Prepaid Expenses ^[iii]	6.1	6.1	-	8.4
Average Inventory	6.6	6.6	-	6.7
Average Working Capital Provision	<u>22.5</u>	<u>22.8</u>	<u>0.3</u>	<u>25.6</u>

[i] Days in year

365 365 365

[ii] Provision for Cash uses Days in year [i] times # of days set at:

15 15 15

[iii] For 2022, Average Prepaid Expenses calculated as 59% of the forecast insurance expense.

[4] The 2023 debt rate is set at 5.5% pursuant to the calculation on Schedule 2.2 and Section 10.1 (b) of the 2022-2023 ITS. The debt rate includes fees, if any, for the line of credit required pursuant to CER Order AO-001-FRO-002-2017 (A98410).

[5] Calculation of annual depreciation adjustment to actual booked depreciation expense for disallowed plant (\$000).

Disallowed Plant	Asset	2022	2023	Expense	Expense	Expense
Expansion CCI - 2010	(6,673)					
Accumulated Depreciation - 2022	1,989	2.13%	3.33%	142	142	222
Disallowed Plant						
System Optimization Project (costs > \$21 million rate base cap) - 2022	(5,719)					
Accumulated Depreciation - 2022	342	3.02%	3.16%	5	173	181
Total Depreciation Expense Adjustment				<u>147</u>	<u>315</u>	<u>403</u>

[6] Includes \$17.9 million interim insurance proceeds related to 2021 BC Lower Mainland Flood capital spending.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 2.1**

Calculation of Rate Base, Capital Cost Recovery, and Adjustment
Summary of Capital Additions by Major Categories
(\$000)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual	2022 Variance	2023 Proposal
1	A. Mainline Repair Projects ^[1]					
2	1-Jan		537	10,568	10,031	4,621
3	31-Dec		32,288	85,362	53,073	9,784
4	Total	[line 2 + line 3]	<u>32,825</u>	<u>95,930</u>	<u>63,105</u>	<u>14,405</u>
5	B. Facility Pipeline Projects ^[2]					
6	1-Jan		333	693	359	4,164
7	31-Dec		6,452	3,151	(3,301)	13,968
8	Total	[line 6 + line 7]	<u>6,785</u>	<u>3,843</u>	<u>(2,942)</u>	<u>18,132</u>
9	C. Tanks ^[3]					
10	1-Jan		42	17	(25)	8,364
11	31-Dec		9,401	1,547	(7,854)	12,001
12	Total	[line 10 + line 11]	<u>9,443</u>	<u>1,565</u>	<u>(7,878)</u>	<u>20,365</u>
13	D. Westridge Marine Terminal Upgrades ^[4]					
14	1-Jan		-	16	16	-
15	31-Dec		197	66	(131)	-
16	Total	[line 14 + line 15]	<u>197</u>	<u>83</u>	<u>(115)</u>	<u>-</u>
17	E. Others ^[5]					
18	1-Jan		81	(0)	(82)	1,480
19	31-Dec		3,304	142	(3,162)	1,074
20	Total	[line 18 + line 19]	<u>3,386</u>	<u>142</u>	<u>(3,244)</u>	<u>2,554</u>
21	F. Total Capital Additions					
22	1-Jan	[sum of (lines 2, 6, 10, 14 & 18)]	994	11,294	10,301	18,629
23	31-Dec	[sum of (lines 3, 7, 11, 15 & 19)]	51,642	90,268	38,626	36,866
24	Grand Total	[line 22 + line 23]	<u>52,636</u>	<u>101,562</u>	<u>48,926</u>	<u>55,495</u>

Note(s):

- [1] Mainline repairs, natural hazard assessment/remediation, cathodic protection, Mainline valve replacement, and other Mainline related projects are included.
- [2] Safety improvements, pumping equipment, piping modification, arc flash mitigation, seismic upgrades, leak detection flow meters, voltage sag correction, and other facility related projects are included.
- [3] Secondary tank containment upgrades, heel reduction, tankage upgrades and other tank related projects are included.
- [4] Regulated Westridge Marine Terminal upgrade projects are included.
- [5] Other minor capital projects are included such as equipment replacements and minor facilities repairs that are not specifically budgeted.
- [6] Capital projects that are of material value (i.e. > \$1M) are reviewed and discussed with Shippers as part of the annual toll consultation.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement**Schedule 2.2**

Calculation of Rate Base, Capital Cost Recovery, and Adjustment

Calculation of 2023 Debt Rate

(units as shown)

Line	Month	Schedule & Line ref.	2022	2023	
			Fixed	2021 Benchmark Rate	2022 Benchmark Rate
1	A. Debt Rate Adjustment ^[1]				
2	January			0.41%	1.67%
3	February			0.73%	1.79%
4	March			0.99%	2.42%
5	April			0.93%	2.64%
6	May			0.87%	2.60%
7	June			0.97%	3.17%
8	July			0.78%	2.83%
9	August			0.87%	3.34%
10	September			1.11%	3.24%
11	October			1.42%	3.41%
12	November			1.56%	3.18%
13	December			1.30%	3.37%
14	Annual average rate			1.00%	2.81%
15	Debt Rate Adjustment	[2022 AVG rate - 2021 AVG rate]			1.81%
16	B. Debt Rate		4.93%		
17	Debt Rate ^[2]	[(Prior year rate + line 15) but within the range of 4.5% and 5.5%]			5.50%

Note(s):

- [1] Debt Rate Adjustment is calculated based on the monthly average rate of the Government of Canada Benchmark Bond Yields - 5 Year. The monthly yield data could be retrieved on the Bank of Canada website under series number V122540.
- [2] The 2023 debt rate is calculated pursuant to Section 10.1 (b) of the 2022-2023 ITS. The rate shall not be lower than 4.5% and shall not exceed 5.5%.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 3**

Summary of Fixed Costs and Trans Mountain Personnel Adjustment
(\$000 or units as shown)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual	Escalator ^[5]	2023 Fixed
1	A. Direct G&A ^[1]					
2	Total Fixed Direct G&A Costs		2,061		2%	2,103
3	B. Trans Mountain Personnel ^[2]					
4	Fixed Trans Mountain Personnel ^[3]		75,800		2.5%	77,670
5	Trans Mountain Personnel Adjustment ^[4]					
6	Actual Trans Mountain Personnel			86,334		
7	Difference between Actual and Fixed amounts	[line 6 - line 4]		10,533		
8	Total saving to share	[Negative shown on line 7]		-		
9	Shippers' share of the saving	[50% * line 8]		-		
10	Trans Mountain's share of the saving	[line 8 - line 9]		-		
11	Total Fixed Operating Expenses	[line 2 + line 4]	77,862			79,773
12	Trans Mountain Personnel Adjustment	[line 9]		-		
13	Carrying Charges	[line 9 * rate on Sch 9]		-		

Note(s):

- [1] Amounts shown exclude Flow Through Costs. Forecast Flow Through Costs are provided on Schedule 4.
- [2] Trans Mountain Personnel means personnel costs as transferred to Trans Mountain. Trans Mountain Personnel includes pension costs pursuant to Section 3.1 (rr) of the 2022-2023 ITS.
- [3] 2022 Trans Mountain Personnel was rebased by escalating the 2019 actual Personnel costs of \$69.5 million by 2.5% per year to 2022 plus \$1 million for cyber security. The 2023 Trans Mountain Personnel escalates the 2022 base amount of \$74.8 million by 2.5% and adds \$1 million for cyber security. Personnel costs are described in Sections 9.3 and 9.4 of the 2022-2023 ITS.
- [4] Trans Mountain and Shippers have agreed to review the Trans Mountain Personnel amount annually and to determine whether further adjustments are required in 2023 pursuant to Section 11.5 of the 2022-2023 ITS.
- [5] Annual escalator for Direct G&A is fixed at 2% for the Term pursuant to Section 9.1 of the 2022-2023 ITS. Annual escalator for Trans Mountain Personnel base amount is fixed at 2.5% for the Term and applied as described in note 3 above.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 4

Summary of Flow Through Costs and Adjustments
(\$000)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual	2022 Variance	2023 Proposal
1	Flow Through Costs ^{[1][2]}					
2	Power		39,933	56,225	16,292	51,656
3	Property Taxes		31,582	31,161	(421)	32,360
4	Integrity Management		46,575	34,940	(11,636)	47,376
5	Land and Right of Way Management		6,604	8,858	2,254	8,865
6	Environmental Compliance and Remediation		14,469	14,768	299	15,240
7	Fire, Safety and Security		10,549	6,973	(3,576)	10,501
8	Insurance		9,291	10,275	984	14,173
9	CER Cost Recovery		4,080	4,080	(0)	2,588
10	Total Flow Through Costs		163,084	167,279	4,195	182,761
11	Carrying Charges	[if line 10<0, line 10 * rate on Sch 9]			-	

Note(s):

- [1] This schedule summarizes the Flow Through Costs and prior-year adjustments to be included in the Revenue Requirement.
- [2] 2021 BC Flood-related Flow Through Costs are included in the total costs presented in this Schedule. A Flood Deferral Account, Schedule 4.3, separates and tracks the flood-related Flow Through Costs and adjustments associated with the BC Floods for which an insurance reimbursement is being sought. The Flood Deferral Account will defer the inclusion of the flood-related Flow Through Costs net of the insurance deductible into the Revenue Requirement until the insurance claim is resolved. This deferral amount is shown on line 6 on Schedule 1.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement Schedule 4.1

Summary of Power Transmission Volume and BC Energy Cost Savings
(units in \$000 or as otherwise shown)

Line	Description	Schedule & Line ref.	2022 Baseline	2022 Actual
1	A. Transmission Volume Cost Management Report ^[1]			
2	Average billing demand (MW) ^[3] ^[4]		136.44 ^[2]	123.97 ^[2]
3	Demand rate (\$000/MW) ^[5]		131.31	131.31
4	Total transmission costs ^[3]		17,916	16,279
5	Transmission savings			1,638
6	Demand reduction fees ^[6]			11
7	Total transmission volume savings ^[7]	[line 5 - line 6]		1,627
8	B. BC Energy Price Management Report ^[8]			
9	BC Energy rate (\$/MWh) ^[9]		50.89	46.75
10	BC energy consumption (MWh) ^[10]		246,415	246,415
11	Total BC energy costs ^[10]	[line 9 * line 10/1000]	12,541	11,520
12	BC energy price savings			1,021
13	Negotiation costs ^[11]			-
14	Total BC energy price savings	[line 12 - line 13]		1,021
15	C. Total Savings	[line 7 + line 14]		2,648

Note(s):

- [1] Trans Mountain manages system transmission volume on behalf of the Shippers and expects to reduce the annual average monthly billing demand by managing power supply contracts and physical consumption, without impacting throughput. Minimum contract levels can be optimized to match physical needs of the Trans Mountain System. In addition, while there is always a pair of stations that are at maximum flow rates (reflecting current System design and bottlenecks), all other stations can be managed to ensure additional costs are not being incurred.
- [2] **Variable inputs used above**
Ex-Edm Throughput (m³/day) 51,338 51,338
- [3] The actual average billing demand and transmission costs are determined from the actual vendor invoices. Both components are determined as the sum of the monthly invoiced amounts for all mainline pump stations.
- [4] The baseline average billing demand = $0.00209459 * (\text{annual Ex-Edm throughput in m}^3/\text{day}) + 28.90935272$ (MW).
- [5] Demand rate is determined as the actual total transmission costs, before demand reduction fees, divided by the actual average billing demand.
- [6] Demand reduction fees may be incurred to obtain reductions in average monthly billing demand and may include fees charged by transmission supplier and consulting fees. Carryover from prior years may occur when demand reduction fees are greater than transmission
- [7] Total savings is the savings after deducting the demand reduction fees and carryovers from prior years.
- [8] The majority of the mainline pump stations in BC obtain electric service under BC Hydro's Electric Tariff, Rate Schedule 1823. The default Energy Rate under Rate Schedule 1823 is determined under subsection (a). Trans Mountain may elect to obtain energy under an alternate rate, subsection (b), and negotiate with BC Hydro to obtain credits under the Power Smart program to purchase energy at lower prices. The driver for this saving arises from the additional administrative management costs incurred to use Rate Schedule 1823 subsection (b) as eligibility for this rate requires annual reviews and negotiations with BC Hydro.
Where energy consumption has increased to the extent that there are no savings under Rate Schedule 1823 subsection (b), the savings will be zero. This may occur if Trans Mountain's throughput increases substantially due to achieving incentive volumes. Should a significant throughput increase be expected, Trans Mountain may elect to purchase energy under Rate Schedule 1823 subsection (a) until a new Power Smart baseline can be negotiated for the increased throughput level.
- [9] The actual energy rate is determined as the actual total BC energy costs, before negotiation costs, divided by the actual energy
- [10] The Total BC energy costs and the energy consumption are determined from the actual vendor invoices. Both components are determined as the sum of the monthly invoiced amounts for all mainline pump stations under BC Hydro's Electric Tariff, Rate Schedule 1823.
- [11] Negotiation costs are the third party costs incurred to manage the BC Power Smart Program and to negotiate power credits and rate reduction.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 4.2**

Calculation of the Petroleum Loss Allowance Percentages ^[1]
(units in \$000 or as otherwise shown)

Line	Description	Comments / Units	2022 Approved ^[2]	2023 Proposal
1	A. 2022 PLAP			
2	Mainline System Crude Petroleum PLAP		0.09%	
3	Mainline System Refined Petroleum PLAP		0.06%	
4	Non Mainline System Petroleum PLAP		0.03%	
5	B. Percentage Adjustment to subsequent year PLAP			
6	Balance Sheet amount at Dec 31, due from shippers (positive), due to shippers (negative)			\$ (4,799)
7	Average annual price of crude	per m ³		\$ 727.38
8	Calculated volume equivalent (m ³)	[line 6 * 1000 ÷ Line 7]		(6,597)
9	Total Deliveries	m ³		21,704,223
10	F. Percentage Adjustment to subsequent year PLAP	[line 8 ÷ line 9]		-0.03%
11	Percentage adjustment applied to each PLAP			-33.77%
12	Subsequent year PLAP ^[3]			
13	Mainline System Crude Petroleum PLAP	[line 2 * (1 + line 11)]		0.06%
14	Mainline System Refined Petroleum PLAP	[line 3 * (1 + line 11)]		0.04%
15	Non Mainline System Petroleum PLAP	[line 4 * (1 + line 11)]		0.02%

Note(s):

- [1] The PLAPs work in conjunction with the Inventory Settlement Procedure and Refined Petroleum Reconciliation Procedure filed with the 2022-2023 ITS. Any revisions to the Procedures are posted on the Trans Mountain tolls and tariffs website.
- [2] 2022 PLAPs were approved by CER Order TO-002-2022 dated April 29, 2022.
- [3] 2023 Proposed PLAPs are calculated pursuant to Section 11.7 (b) of the 2022-2023 ITS.
- [4] Trans Mountain and Shippers have agreed to review the PLAPs periodically to determine whether further adjustments are required. The intent after the reset is to keep PLAPs relatively stable from year to year.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

Schedule 4.3

Flood Deferral Account ^[1]

(\$000)

Line	Description	2021 Actual	2022 Approved	2022 Actual	2023 Proposal	Total ^[2]
1	Integrity Management	3,552	117	903		4,455
2	Land and Right of Way Management	5,438	185	3,375	1500	10,313
3	Environmental Compliance and Remediation	570		138	500	1,208
4	Fire, Safety and Security	1,456		(18)		1,438
5	Subtotal	<u>11,016</u>	<u>302</u>	<u>4,398</u>	<u>2,000</u>	<u>17,414</u>
6	Less: Insurance Deductible	(5,000)				(5,000)
7	Insurance Recovery					(3,110)
8	Total	<u><u>6,016</u></u>	<u><u>302</u></u>	<u><u>4,398</u></u>	<u><u>2,000</u></u>	<u><u>9,304</u></u>

Note(s):

[1] This schedule is used to summarize the 2021 BC Flood-related Flow Through Costs and adjustments.

[2] The balance in the deferral account will be included in the Revenue Requirement after the insurance claim is processed and applicable insurance proceeds are received and applied. Totals include 2021 Actual, 2022 Actual, and 2023 Proposal.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 5

Calculation of Operational Capacity Incentive Adjustment

(units as shown)

Sheet 1 of 2

Line	Description	Schedule	Sharing	2022 Update (Jan - Dec)
1	A. System capacity percentages			
2	Target capacity (fixed for Term)			96.0%
3	Achieved capacity			93.6%
4	B. System volumes			
5	Delivered volume (m ³ /d) ^[1]			51,338
6	Deemed Heavy Percentage ^{[4] [5] [6]}			9.8%
7	100% hydraulic volume (m ³ /d) ^[2]			54,827
8	Target hydraulic volumes w/o maintenance adjustment (m ³ /d)	[line 2 * line 7]		52,634
9	Adjustment hours ^[3]			374
10	Maintenance capacity adjustment (m ³ /d)	[line 9 ÷ 24 ÷ days in a year x line 8]		2,246
11	Target System Capacity (m ³ /d)	[line 8 - line 10]		50,388
12	C. Annualized volumes for sharing (m³/d)	[line 5 - line 11]		951
13	D. Revenue sharing calculation			
14	Toll for sharing \$/m ³ (fixed for Term)			15.7500
15	Days available for sharing			365
16	Revenues to be shared (\$000)	[line 12 * line 14 * line 15]		<u>5,464</u>
17	Operational Capacity Incentive Adjustment	Trans Mountain's share ^[7]	Lower of 25% of line 16 or \$4 million	<u>1,366</u>
18		Shippers' share	[line 16 - line 17]	<u>4,098</u>
19	Carrying Charges (\$000)	[negative (line 18 * rate on Sch 9)]		(88)

Note(s):

- [1] For capacity incentive sharing purposes, only those volumes injected at Edmonton / Edson and delivered out of the System are used along with the Deemed Heavy Percentage as determined in Note [6].
- [2] Hydraulic Formula:
 For $x \leq 20.01\%$, $y = (809386115x^5 - 618225002x^4 + 163964466x^3 - 15952931x^2 - 193925x + 395343)/95\%/6.2898108$
 For $x > 20.01\%$, $y = (-24844444x^6 + 62290768x^5 - 62888803x^4 + 31439150x^3 - 7464327x^2 + 480997x + 333140)/95\%/6.2898108$
 Where $y = 100\%$ hydraulic capacity, $x =$ Deemed Heavy Percentage as determined in Note [6].
- [3] Adjustment hours include system shutdowns, maintenance activities, Shipper actions including but not limited to Delivery Point delays, Kamloops Excess Nominations, and/or Force Majeure, and they are reflected in the Target System Capacity.
- [4] A heavy percentage indicator will be measured for the volumes injected at Edmonton and delivered out of the System for determination of the monthly Adjusted Heavy Percentage:
 Blended Heavy Percentage: measure based on petroleum grade category indicated on delivery tickets for a batch.
 Pre-blend Heavy Percentage: measure based on the deemed petroleum type indicated at Edmonton injection of the component material within a batch.
- [5] Two heavy percentage indicators will be measured and recorded on a monthly basis. Monthly Adjusted Heavy Percentage will be determined as follows:
 (a). If Blended Heavy Percentage and Pre-blend Heavy Percentage are both greater than 14%, the Adjusted Heavy Percentage is set as the Blended Heavy Percentage.
 (b). If Blended Heavy Percentage and Pre-blend Heavy Percentage are both less than 14%, the Adjusted Heavy Percentage is set as the Blended Heavy Percentage.
 (c). If Blended Heavy Percentage is less than 14% and Pre-blend Heavy Percentage is greater than 14%, the Adjusted Heavy Percentage is set as 14%.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 5**

Calculation of Operational Capacity Incentive Adjustment

(units as shown)

Sheet 2 of 2

[6] The Deemed Heavy Percentage will be the annual average of monthly Adjusted Heavy Percentages.

2022 Deemed Heavy Percentage:

Month	Blended Heavy Percentage	Pre-blend Heavy Percentage	Adjusted Heavy Percentage	Days in a Month
January	6.7%	18.8%	14.0%	31
February	7.6%	18.2%	14.0%	28
March	20.8%	26.2%	20.8%	31
April	10.9%	16.1%	14.0%	30
May	5.0%	9.8%	5.0%	31
June	10.0%	17.7%	14.0%	30
July	1.5%	7.6%	1.5%	31
August	0.0%	4.4%	0.0%	31
September	11.9%	13.4%	11.9%	30
October	16.2%	20.2%	16.2%	31
November	1.0%	8.0%	1.0%	30
December	5.5%	11.3%	5.5%	31
Annual simple average/Deemed Heavy Percentage	8.1%	14.3%	9.8%	365

[7] The Operational Capacity Incentive Adjustment for the account of Trans Mountain for the year shall not exceed \$4 million.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

Schedule 6

Calculation of Transportation Revenue Adjustment

(units as shown)

Line	Description	Schedule & Line ref.	2022 Calculation ^[1]	
			System Deliveries (m ³ /day)	Annual Revenues (\$000)
1	Transportation Revenue Adjustment ("TRA")			
2	A. Interim Toll Period	January to April	120 days	120 days
3	Forecast Amounts for Toll Purposes ^[2]		48,092	113,460
4	Actual Amounts		48,040	112,999
5	Interim TRA	[line 4 - line 3]	(52)	(460)
6	B. Final Toll Period	May to December	245 days	245 days
7	Forecast Amounts for Toll Purposes ^[2]		51,381	269,363
8	Actual Amounts		52,953	269,421
9	Toll Period TRA	[line 8 - line 7]	1,572	58
10	Other Adjustments			5
11	Total TRA - (Shortfall) / Surplus	[line 5 + line 9 + line 10]		(398)
12	Annual TRA (\$000)			
13	TRA Surplus refundable to Shippers	[positive shown on line 11]		-
14	TRA Shortfall chargeable to Shippers	[negative shown on line 11]		398
15	TRA to be included in the subsequent year (\$000)			398
16	Carrying Charges	[line 13 * rate on Sch 9]		-

Note(s):

[1] Proof without carrying charges.

		Reconciliation of amounts	
		Shippers	TM
Interim Revenues collected	[line 4]	112,999	
Final Toll Revenues collected	[line 8]	269,421	
Other Adjustment	[line 10]	5	
Total Revenues collected		382,425	
TRA	[line 15]	398	
Total Tolloed Revenues	[Schedule 1, line 15]		382,823
Net revenues paid / collected		382,823	382,823

[2] The 2022 forecast system deliveries for interim and final tolls periods can be found in the 2022 Final Tolls filing, Toll Calculation Schedules, TL Schedule 2, Sheet 1, Line 12. The 2022 forecast annual revenues for interim and final toll periods can be found in the 2022 Final Tolls filing, Toll Calculation Schedules, TL Schedule 3, Sheet 2, Line 7. CER filing ID: C18346.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement**Schedule 7**

Calculation of Income Tax Provision and Adjustment

(\$000)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual	2022 Variance	2023 Proposal
1	Forecast Provision for Income Taxes Payable					
2	Return on Equity					
3	2022 / 2023 Rate Base	[Schedule 2, line 22]	43,235	44,141	906	45,811
4	Total Return on Equity		43,235	44,141	906	45,811
5	Permanent & Timing Differences					
6	Capital Cost Allowance ^[1]		(49,896)	(56,354)	(6,458)	(53,812)
7	Depreciation	[Schedule 2, line 25]	37,442	36,385	(1,056)	40,015
8	Cost of Retirements & Other Differences ^[2]	prior year's adjustment	(500)	17,895	18,395	(2,411)
9	Capitalized Interest AFUDC		(878)	(449)	429	(725)
10	Tax Base		29,403	41,618	12,215	28,878
11	Income Tax Provision ^[3]	[line 10 * tax rate / (1 - tax rate)]	9,629	13,630	4,000	9,457
12	Income Tax Provision		9,629	13,630	4,000	9,457
13	Carrying Charges	[if line 12<0, line 12 * rate on Sch 9]			-	

Note(s):

- [1] CCA forecast is provided on Schedule 7.1. 2022 Actual does not reflect July 1 tax filing review. New income tax rules came into effect on January 1, 2017 and November 21, 2018 and are reflected in the CCA calculation.
- [2] Includes interim insurance proceeds related to flood capital spending.
- [3] Income tax rates (combined Federal and Provincial). 24.7% 24.7% 24.7%
- [4] Taxes Payable used in Working Capital calculation in Sch 2 Note [3]. 7,254 10,267 7,124

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

Schedule 7.1

CCA for the Rate Base: (i) 2022; and (ii) Forecast for 2023

(\$ as shown)

Year	Description	CEC 7%	Class 14.1 ^[2] 5%	Class 1 4%	Class 2 6%	Class 3 5%	Class 6 10%	Class 7 15%	Class 8 ^[4] 20%	Class 10 30%	Class 17 8%	Class 49 8%	Class 50 55%	TOTAL
	Regular Rate													
	All Rate ^[3]	11%	8%	6%	9%	8%	15%	23%	30%	45%	12%	12%	83%	
2021	UCC at Dec. 31	1,665,462	43,312	142,705,722	4,091,120	1,640,685	60,426,856	12,399,286	18,247,316	641,243	3,057,820	324,304,862	2,621	569,226,305
2022	Additions ^[1]	-	-	2,906,664	-	-	1,576,299	29,657	1,005,987	1,268,180	11,101,614	80,352,724	-	98,241,125
2022	Proceeds	-	-	-	-	-	-	-	-	-	-	-	-	-
		1,665,462	43,312	145,612,387	4,091,120	1,640,685	62,003,155	12,428,943	19,253,303	1,909,423	14,159,434	404,657,585	2,621	667,467,430
	CCA	116,582	2,166	5,708,229	245,467	82,034	6,042,686	1,859,893	3,649,463	192,373	244,626	25,944,389	1,442	44,089,349
	CCA: Additions	-	-	174,400	-	-	236,445	6,673	301,796	570,681	1,332,194	9,642,327	-	12,264,515
2022	Total CCA	116,582	2,166	5,882,629	245,467	82,034	6,279,130	1,866,566	3,951,259	763,054	1,576,819	35,586,716	1,442	56,353,864
2022	UCC at Dec. 31	1,548,879	41,146	139,729,758	3,845,653	1,558,650	55,724,025	10,562,377	15,302,043	1,146,369	12,582,615	369,070,870	1,180	611,113,566
2023	Additions ^[1]	-	-	1,590,194	-	-	862,370	16,225	550,361	693,803	6,073,533	43,959,812	-	53,746,298
2023	Proceeds	-	-	-	-	-	-	-	-	-	-	-	-	-
		1,548,879	41,146	141,319,952	3,845,653	1,558,650	56,586,395	10,578,602	15,852,404	1,840,172	18,656,147	413,030,682	1,180	664,859,863
	CCA	108,422	2,057	5,589,190	230,739	77,933	5,572,402	1,584,357	3,060,409	343,911	1,006,609	29,525,670	649	47,102,347
	CCA: Additions	-	-	95,412	-	-	129,356	3,651	165,108	312,211	728,824	5,275,177	-	6,709,739
2023	Total CCA	108,422	2,057	5,684,602	230,739	77,933	5,701,758	1,588,007	3,225,517	656,122	1,735,433	34,800,847	649	53,812,086
2023	UCC at Dec. 31	1,440,458	39,089	135,635,350	3,614,914	1,480,718	50,884,637	8,990,595	12,626,887	1,184,050	16,920,714	378,229,835	531	611,047,778

Note(s):

- [1] Additions exclude AFUDC amounts.
- [2] As of January 1, 2017, property that formerly would have been eligible capital property in the cumulative eligible capital (CEC) account is now considered depreciation property under capital cost allowance Class 14.1 with a rate of 5%. CCA calculation is adjusted to reflect the income tax rule change.
- [3] On November 21, 2018, the Government of Canada introduced the Accelerated Investment Incentive (AII). AII provides an increased first-year CCA deduction for eligible property acquired after November 20, 2018 and available for use before 2028. All subsequent forecasts have reflected this new tax rule change.
- [4] System Optimization Project costs in excess of the \$21 million cap are excluded from 2020 to 2022 additions to Class 8.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 8**

Summary of Non-Routine Adjustments
(\$000)

Line	Description	Schedule & Line ref.	2022 Approved	2022 Actual	2022 Variance	2023 Proposal
1	Non-Routine Adjustments					
2	Costs for CER mandated regulatory changes (e.g. Pipeline Abandonment)		-	(24)	(24)	48
3	Costs for CER OPR change (ISLMS)		500	473	(27)	585
4	Costs for 2019/2021 Depreciation studies		48	-	(48)	-
5	NRA for Edmonton Terminalling Revenues	[Schedule 8.1]	(1,500)	(2,197)	(697)	(1,500)
6	Non-Performance Damage Assessment, Demurrage and/or Other Refund		-	(585)	(585)	-
7	Alternate Delivery Point Fees		-	(4,559)	(4,559)	-
8	Total NRAs and NRA Variances to be included in subsequent year's tolls		<u>(952)</u>	<u>(6,891)</u>	<u>(5,939)</u>	<u>(867)</u>
9	Carrying Charges	[if line 8<0, line 8* rate on Sch 9]			(127)	
10	Westridge Dock Bid Premium Refund	[Schedule 8.2]				
11	Refund to reduce Tolls		(79,401)	(79,019)	383	(66,857)
12	Refund to offset Pipeline Reclamation Surcharge		(12,617)	(12,829)	(212)	(12,673)
13	Refund to offset System Optimization Surcharge		227	227	-	-
14	Total Refund		<u>(91,792)</u>	<u>(91,621)</u>	<u>171</u>	<u>(79,530)</u>

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 8.1**

Summary of Non-Routine Adjustments
Calculation of the NRA for the Edmonton Terminalling Revenues
(\$000)

Line	Description	2022 Approved	2022 Actual	2022 Share	2022 Variance	2023 Proposal	2023 Share
1	A. Revenue Sharing						
2	Revenues collected and available for sharing	3,000	4,162		1,162	3,000	
3	B. Revenue Returned to Shippers^[1]						
4	\$0 - \$3M (including \$3M)	1,500	1,500	50%	-	1,500	50%
5	Between \$3M and \$5M (including \$5M)	-	697	60%	697	-	60%
6	Between \$5M and \$7.5M (including \$7.5M)	-	-	70%	-	-	70%
7	Greater than \$7.5M	-	-	75%	-	-	75%
8	Total Shippers' share	<u>1,500</u>	<u>2,197</u>		<u>697</u>	<u>1,500</u>	
9	C. Refund amount	(1,500)	(2,197)		(697)	(1,500)	
10	Impact on Revenue Requirement				(697)	(1,500)	

Note(s):

[1] The sharing percentage is determined when the collected revenues are:

	<u>Share %</u>
(i) less than or equal to \$3M, Shippers will be refunded with 50% of the revenue.	50%
(ii) between \$3M and \$5M (including \$5M), Shippers will be refunded with 60% of the revenue.	60%
(iii) between \$5M and \$7.5M (including \$7.5M), Shippers will be refunded with 70% of the revenue.	70%
(iv) greater than \$7.5M, Shippers will be refunded with 75% of the revenue.	75%

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 8.2**

Summary of Non-Routine Adjustments
Westridge Dock Bid Premium Refunds
(\$000)

Sheet 1 of 2

Line	Description	Amount Collected	2022 Approved	2022 Actual	2023 Proposal
1	A. 2021 Collection:				
2	2021 Collection	69,975			
3	Total Collection as of Dec 31 2021	<u>69,975</u>			
4	Carrying Charges as of Dec 31 2021	6,581			
5	Total to be refunded as of Jan 1 2022	<u><u>76,556</u></u>			
6	Q1 2023 Collection				6,690
7	Total to be refunded as of Jan 1 2023 (Line 18 + Line 19)				<u><u>79,530</u></u>
8	B. Disposition: ^[1]				
9	Refund Amount - Part A - Toll Reduction (Jan - Dec)		(79,401)	(79,019)	(66,857)
10	Refund Amount - Part B - Offset to Pipeline Reclamation Surcharge (Jan - Dec)		(12,617)	(12,829)	(12,673)
11	Refund Amount - Part C - Offset to System Optimization Surcharge (Jan - Dec) ^[2]		227	227	-
12	Total Refund		<u><u>(91,792)</u></u>	<u><u>(91,621)</u></u>	<u><u>(79,530)</u></u>
13	C. Total net balance				
14	Remaining 2021 collection			(0)	
15	Carrying Charges for 2021 collected and accumulated interest			598	
16	2022 collection			71,421	
17	Carrying Charges for 2022 collected			<u>821</u>	
18	Total net balance as of Dec 31, 2022			<u><u>72,840</u></u>	
19	Q1 2023 Collection				6,690
20	Total net balance for future year refund				<u><u>79,530</u></u>

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 8.2

Summary of Non-Routine Adjustments
Westridge Dock Bid Premium Refunds

Sheet 2 of 2

Note(s):

[1] For 2022, the estimated applicable carrying charges on the outstanding balance of the 2020 and 2021 Westridge Dock Bid Premiums and the accumulated interest are:

Month	Monthly Rate	Balance Outstanding (Beginning of month)	2022 Refunds	Carrying Charges	Balance Outstanding (End of month)
January	0.45%	76,556	(9,611)	29	66,973
February	0.45%	66,973	(9,599)	25	57,399
March	0.68%	57,399	(10,899)	33	46,533
April	0.98%	61,769	(9,739)	51	52,081
May	1.20%	52,081	(6,527)	52	45,606
June	1.68%	45,606	(6,569)	64	39,101
July	2.28%	39,101	(6,884)	74	32,291
August	2.70%	32,291	(6,101)	73	26,263
Sept	3.28%	26,263	(6,876)	72	19,458
Oct	3.53%	19,458	(6,973)	57	12,543
November	3.95%	12,543	(4,981)	41	7,603
December	4.34%	7,603	(6,862)	27	769
As of Dec 31			<u>(91,621)</u>	<u>598</u>	
2022 (Q2-Q4) Collected Amount					71,250
Carrying Charges on 2022 Collected					821
2022 Ending Balance					<u>72,840</u>
Q1 2023 Collection					<u>6,690</u>
Opening Balance as of Apr 1, 2023					<u>79,530</u>

[2] The refund of Westridge Dock Bid Premiums to offset the System Optimization Surcharge was approved by the CER Order TO-002-2021 dated April 29, 2021 and CER Order TO-005-2021 dated November 26, 2021 approved the cancellation of the System Optimization Surcharge and the offsetting Westridge Dock Premium Surcredit.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement**Schedule 8.3**

New Business Opportunities: Black Pines/DRA Cost Recovery

(\$000)

Line	Description	2022 Actual	2023 Proposal	Total
1	Early In Service Black Pines Pump Station ^[1]	756	600	1,356
2	Drag Reducing Agent Capital - Kingsvale ^[2]	163	40	203
3	Drag Reducing Agent Fluid - Kingsvale ^[2]	346		346
4	Total	<u>1,264</u>	<u>640</u>	<u>1,904</u>

Note(s):

- [1] Temporary pipeline interconnection to TMEP Black Pines Pump Station to support debottlenecking of the existing system until TMEP Is complete. 2022 costs include installation of temporary piping and updating associated SCADA and electrical controls. Estimated 2023 costs include removal of temporary piping. Shippers agreed that costs up to \$1.8 million are to be included in tolls.
- [2] Commenced January 2023 and until TMEP is in-service, Drag Reducing Agent will be injected into heavy batches to debottleneck Kingsvale to Hope. Costs include \$163K initial installation and monthly DRA fluid costs. Shippers agreed that capital costs up to \$240k are to be included in tolls.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
Schedule 9

Calculation of 2022 Carrying Charge Rate ^[1]
(units as shown)

Line	Month	TD Prime Rate	Days/ Month	Total Days/ Month	2022
					Actual
					Monthly
					Rate
1	January	2.45%	31	31	0.45%
2	February	2.45%	28	28	0.45%
3	March	2.45%	2		
4	March	2.70%	29	31	0.68%
5	April	2.70%	13		
6	April	3.20%	17	30	0.98%
7	May	3.20%	31	31	1.20%
8	June	3.20%	1		
9	June	3.70%	29	30	1.68%
10	July	3.70%	13		
11	July	4.70%	18	31	2.28%
12	August	4.70%	31	31	2.70%
13	September	4.70%	7		
14	September	5.45%	23	30	3.28%
15	October	5.45%	26		
16	October	5.95%	5	31	3.53%
17	November	5.95%	30	30	3.95%
18	December	5.95%	7		
19	December	6.45%	24	31	4.34%
20	Average rate		365		2.14%

Note(s):

- [1] The Carrying Charge rate is the average of the monthly Trans Mountain overnight bank rate (TD prime minus 2%, or as may be changed from time to time).
- [2] Summary of 2022 Carrying Charges (\$000)

Description	Schedule & Line ref.	2022 Actual
Capital Cost Recovery Adjustment	[Schedule 2, Sheet 1, line 28]	-
Trans Mountain Personnel Adjustments (Shippers' share)	[Schedule 3, line 13]	-
Flow Through Cost Adjustment	[Schedule 4, line 11]	-
Capacity Incentive (Shippers' share)	[Schedule 5, line 19]	(88)
Transportation Revenue Adjustment	[Schedule 6, line 16]	-
Income Tax Adjustment	[Schedule 7, line 13]	-
NRA Adjustments	[Schedule 8, line 9]	(127)
Total		(214)

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
CER 1**

CER Compliance Reporting

Income Statement

(\$000) unless otherwise indicated

(For 12 Months Ended December 31, 2022)

Line	Particulars	CER Accounts	Annual Actuals ^[2]	Filed Forecast	Variance Col.
1	(a)	(b)	(c)	(d)	(c) - (d)
2	Revenues				
3	Transportation Revenue	501	346,297	354,398	(8,101)
4	Terminalling Revenues	556	4,162	3,000	1,162
5	Prior Year Adjustments	501	25,425	25,425	-
6	Current Year Adjustments	501	1,397	-	1,397
7	Other Revenue	554	5,144	-	5,144
8	Total Revenue ^[3]		<u>382,425</u>	<u>382,823</u>	<u>(398)</u>
9	Operating Expenses				
10	Allocations from TMCi ^[1]	710-01, 720-01, 730-01	75,800	75,800	-
11	Fuel & Power	720-02	56,225	39,933	16,292
12	Other Operating & Maintenance	710, 720, 730	78,324	90,098	(11,774)
13	Depreciation & Amortization	414, 423	36,385	37,442	(1,056)
14	Income Taxes	413	16,133	15,457	675
15	Taxes Other than Income	730-16	31,161	31,582	(421)
16	CER Cost Recovery	730	4,080	4,080	(0)
17	Total Operating Expenses		<u>298,108</u>	<u>294,393</u>	<u>3,715</u>
18	Operating Income		84,317	88,430	(4,113)
19	Less:				
20	Financial Charges deemed at 55% of Rate Base ^[4]	417	27,974	27,399	574
21	Preferred Share Dividends		n/a	n/a	n/a
22	Equity Return		<u>56,343</u>	<u>61,030</u>	<u>(4,687)</u>
23	Rate of Return on Rate Base		8.17%	8.74%	
24	Rate of Return on Common Equity ^[5]		12.13%	13.41%	

Note(s):

[1] Staff costs are allocated to Trans Mountain from Trans Mountain Canada Inc.

[2] Annual Actuals include all amounts as booked Dec. 31 of each year plus required adjustments to reflect amounts as calculated in this filing.

[3] Includes all revenues earned on regulated assets.

[4] Financing Fees averaged 5% for 2022 Actuals.

[5] Rate of Return calculation methodology corrected from previous years' filings.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

CER 2

CER Compliance Reporting

Average Rate Base

(\$000) unless otherwise indicated

(For 12 Months Ended December 31, 2022)

Line	Particulars	Annual Actual
1	(a)	(b)
2	Plant in Service	
3	Net Plant	1,009,763
4	Total Plant	<u>1,009,763</u>
5	Working Capital	
6	Cash	10,092
7	Materials and Supplies	6,611
8	Transmission Line Pack	n/a
9	Prepayments and Deposits	6,074
10	Other (please specify)	-
11	Total Working Capital	<u>22,778</u>
12	Deferrals	
13	Deferred Income Taxes	-
14	Total Deferrals	<u>-</u>
15	Total Average Rate Base ^[1]	<u><u>1,032,541</u></u>

Note(s):

[1] The Total Average Rate Base includes all capital spending invested in the rate-regulated assets excluding 1). Capital Cost Incentive (CCI) pursuant to CER Order TO-06-2006; and 2). System Optimization Project costs in excess of \$21 million cap on additions to be rolled into the Rate Base pursuant to CER Order TO-004-2019. The averaging is based on simple half-year average.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

CER 3

CER Compliance Reporting

Throughput Details

Deliveries (m³ / d)

(For 12 Months Ended December 31, 2022)

Line	Particulars	Annual Actuals	Toll Forecast	Variance Forecast
1	(a)	(b)	(c)	(d)
2	Edmonton Kamloops	1,309	907	402
3	Total Kamloops Deliveries	1,309	907	402
4	Edmonton Sumas	33,171	30,882	2,289
5	Kamloops Sumas	-	-	-
6	Total Sumas Deliveries	33,171	30,882	2,289
7	Edmonton Burnaby	11,872	12,588	(716)
8	Kamloops Burnaby	-	-	0
9	Total Burnaby Deliveries	11,872	12,588	(716)
10	Edmonton Westridge	4,987	5,923	(937)
12	Total Westridge Deliveries	4,987	5,923	(937)
13	Total System (Volumes recorded as delivered)	51,338	50,300	1,038

Note(s):

[1] In addition to the annual throughput details provided in this schedule, pursuant to Order MO-036-2017 and CER Filing Manual Guide BB., Trans Mountain submits its traffic data on a quarterly basis in the format required in Guide BB. 2.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement**CER 4**

CER Compliance Reporting

Annual Integrity Spending

(\$000)

(For 12 Months Ended December 31, 2022)

Actual Annual Expenditures^[1]**Actual**

(a)	(b)
Operating	
Program Management	4,909
Surveillance, Condition Monitoring and Integrity Hazard Assessment	10,074
Mitigation and Remediation	19,957
Other Expenditures	-
Total Operating	<u>34,940</u>
Capital	
Program Management	-
Surveillance, Condition Monitoring and Integrity Hazard Assessment	-
Mitigation and Remediation	20,042
Other Expenditures	-
Total Capital	<u>20,042</u>

Note(s):**[1]** Separation into expenditures categories are provided to the extent available.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
CER 5

CER Compliance Reporting
Firm Service Report
Pursuant to Board Order RH-2-2011
(\$000) unless otherwise indicated

(For 12 Months Ended December 31, 2022)

		LTD														
Line	Description	YE 2021	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Total	YE 2022
1	A. Project Spending Details															
2	Edmonton Term Expansion															
	In-service month															
	Jun-14															
3	Build 1 Regulated Tank	Capital Spending	34,084	-	-	-	-	-	-	-	-	-	-	-	-	34,084
4		FS Funds applied	(34,084)	-	-	-	-	-	-	-	-	-	-	-	-	(34,084)
5																
6	Edmonton Meter Bank Expansion	Capital Spending	350	67	188	574	621	1,010	412	573	375	846	725	309	417	6,117
7		FS Funds applied	-	-	(602)	(544)	(635)	(967)	(447)	(551)	(351)	(817)	(692)	(140)	(430)	(6,176)
8	TM Expansion Project															
9	Development costs	Capital Spending	10,686,136	600,216	586,027	695,424	611,128	603,734	762,932	710,751	874,667	827,515	800,923	875,142	719,445	8,667,905
10		Net FS Funds applied	(245,280)	(2,162)	(13,540)	(15,113)	(14,517)	(14,691)	(14,705)	(15,108)	(15,307)	(14,336)	(14,966)	(15,012)	(15,228)	(164,685)
11	Prior month AFUDC / Interest			64,734	72,783	69,194	81,054	82,330	89,057	90,990	98,689	104,372	106,273	115,108	116,994	
12	Net Monthly Balances before Carrying Charges	AFUDC/Interest	10,441,206	662,856	644,856	749,534	677,650	671,416	837,248	786,655	958,073	917,581	892,264	975,407	821,198	8,503,161
13	Net Balance before current month AFUDC / Interest			12,269,981	12,914,837	13,664,372	14,342,022	15,013,438	15,850,686	16,637,341	17,595,415	18,512,996	19,405,259	20,380,666	21,201,865	
14	Monthly Carrying Charge Calculation	AFUDC/Interest	1,230,721	72,783	69,194	81,054	82,330	89,057	90,990	98,689	104,372	106,273	115,108	116,994	125,765	1,152,610
15	Closing Net Monthly Balances		11,671,927	12,342,764	12,984,032	13,745,426	14,424,351	15,102,494	15,941,676	16,736,031	17,699,787	18,619,268	19,520,367	20,497,661	21,327,630	21,327,697
16	B. Firm Service - Special Deposit Account Details															
17	Step 1: Assign Firm Service Fees to ETE Regulated Tank															
18	Monthly Firm Service Fees received ^[5]		(279,364)	(2,162)	(14,142)	(15,658)	(15,153)	(15,658)	(15,153)	(15,659)	(15,658)	(15,153)	(15,658)	(15,153)	(15,658)	(170,861)
19	Less Spending on		34,084	-	-	-	-	-	-	-	-	-	-	-	-	34,084
	ETE - Build 1 Tank															
	MB Expansion		-	67	188	574	621	1,010	412	573	375	846	725	309	417	6,117
20	Remaining after ETE assignment of FS Funds		(245,280)	(2,094)	(13,954)	(15,084)	(14,532)	(14,647)	(14,741)	(15,086)	(15,283)	(14,307)	(14,933)	(14,843)	(15,241)	(164,744)
21	Step2: Reconciliation of Special Deposit Account for Firm Service Fees															
22	Cumulative Firm Service Fees available		(279,364)	(281,526)	(295,668)	(311,326)	(326,478)	(342,136)	(357,288)	(372,947)	(388,605)	(403,757)	(419,415)	(434,568)	(450,225)	(450,225)
23	Cumulative Capital Spending (all Eligible Projects)		10,720,220	11,320,503	11,906,718	12,602,716	13,214,464	13,819,208	14,582,553	15,293,877	16,168,918	16,997,279	17,798,928	18,674,380	19,394,242	19,394,242
24	Net Balance w/o AFUDC / Interest		10,440,856	11,038,977	11,611,050	12,291,390	12,887,986	13,477,073	14,225,264	14,920,930	15,780,314	16,593,522	17,379,513	18,239,812	18,944,016	18,944,016
25	Cumulative prior months AFUDC / Interest		1,230,721	1,230,721	1,303,502	1,372,695	1,453,748	1,536,076	1,625,131	1,716,119	1,814,806	1,919,177	2,025,448	2,140,554	2,257,547	
26	Net Balance before current month AFUDC / Interest		12,269,698	12,914,553	13,664,086	14,341,734	15,013,148	15,850,395	16,637,048	17,595,120	18,512,699	19,404,961	20,380,367	21,201,563		
27	Monthly Carrying Charge Calculation	AFUDC/Interest	1,230,718	72,781	69,193	81,053	82,328	89,055	90,988	98,688	104,371	106,271	115,106	116,992	125,763	2,383,307
28	Closing Net Monthly Balances		11,671,574	12,342,479	12,983,745	13,745,138	14,424,062	15,102,203	15,941,383	16,735,736	17,699,491	18,618,970	19,520,067	20,497,359	21,327,326	21,327,326
29	C. Carrying Costs Details															
30	Bank Interest (negative balances on Line 24)		(10)	-	-	-	-	-	-	-	-	-	-	-	-	(10)
31	AFUDC (positive balances on Line 24)		1,230,718	72,781	69,193	81,053	82,328	89,055	90,988	98,688	104,371	106,271	115,106	116,992	125,763	1,152,589
32	Monthly AFUDC / Bank Interest		1,230,709	72,781	69,193	81,053	82,328	89,055	90,988	98,688	104,371	106,271	115,106	116,992	125,763	1,152,589

Note(s):

[1] "Carrying Charges" means AFUDC or Bank Interest for a given month, when applicable.

[2] AFUDC and AFUDC Rates:

To the extent that cumulative Eligible Project spending does not exceed available funds, no AFUDC is charged.

To the extent that cumulative Eligible Project spending exceeds available funds, AFUDC is charged. Such AFUDC is assigned to Eligible Projects based on priority of funds used (i.e. ETE Regulated tank uses funds first (therefore no AFUDC is assigned) and then TMEP development costs).

2022 AFUDC rate	Equity	ROE	9.50%	times	structure	45%	equals	4.28%
	Debt	Rate	4.93%	times	structure	55%	equals	2.71%
	Combined AFUDC rate							6.98%

[3] Bank Interest means the net percentage interest paid by the bank for this account (interest earned net of bank fees) when there are available funds to earn interest.

2022 Monthly rate	0.45%	0.45%	0.68%	0.98%	1.20%	1.68%	2.28%	2.70%	3.28%	3.53%	3.95%	4.34%
Days in Month	31	28	31	30	31	30	31	31	30	31	30	365

[4] The Life To Date balances as of December 31, 2021 include prior year adjustments.

[5] Firm Service Recontracting was approved by the Commission (C16346) and commenced February 1, 2022.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement**CER 6**

CER Compliance Reporting

Trans Mountain Expansion Project Bulk Oil Cargo Fee Due from Westridge Shippers

Pursuant to Board Order TO-001-2016

(\$000) unless otherwise indicated

(For 12 Months Ended December 31, 2022)

Line	Description	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
1	A. TMEP BOCF Due from Westridge Shippers													
2	Opening Balance	84,856	95,347	95,745	106,282	106,724	107,169	117,754	118,244	118,737	129,370	129,909	130,450	84,856
3	Addition	10,096		10,096			10,096			10,096				40,384
4	Monthly Financing Cost [line 9]	396	397	441	443	445	489	491	493	537	539	541	544	5,754
5	Closing Balance [line 2 + line 3 + line 4]	95,347	95,745	106,282	106,724	107,169	117,754	118,244	118,737	129,370	129,909	130,450	130,994	130,994
6	B. Financing cost details													
7	Balance [line 2 + line 3]	94,952	95,347	105,841	106,282	106,724	117,265	117,754	118,244	128,833	129,370	129,909	130,450	125,240
8	Financing Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
9	Monthly Financing Cost [line 7 * (line 8 ÷ 12)]	396	397	441	443	445	489	491	493	537	539	541	544	5,754

Note(s):

- [1] As published in Canada Gazette Part I, Volume 156, Number 6, dated February 5, 2022, the TMEP BOCF rate applicable is \$25.136 per tonne of bulk oil, plus all applicable taxes, from January 1, 2022. Beginning in 2023 the TMEP BOCF will be published on the Western Canada Marine Response Corporation website (www.wcmrc.com), and will no longer be published in the Canada Gazette.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

CER 7

CER Compliance Reporting

Costs Recovered from Merchant Services at the Edmonton Terminal

Pursuant to Board Order XO-T246-04-2008

(\$000) unless otherwise indicated

(For 12 Months Ended December 31, 2022)

Line	Description	Schedule & Line ref.	2022
1	A. Rate Base ^[1]		
2	Net Rate Base		415,643
3	Equity ^[2]		17,769
4	Debt ^[2]		11,270
5	Depreciation ^[3]		17,200
6	Capital Cost Recovery	[Sum (Lines 3, 4 & 5)]	46,239
7	B. Income Tax Provision		
8	C. Operating Expenses		
9	Power		1,440
10	Property Tax		2,094
11	Insurance		3,524
12	O&M		1,869
13	Employee Services		4,933
14	Total Operating Expenses	[Sum (Lines 9, 10, 11,12 & 13)]	13,860
15	Total Annual Revenue Requirement for Merchant Services	[Sum (Lines 6, 7 & 14)]	60,099

Note(s):

[1] The assets included in the Rate Base are Tanks 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38 and 39, and ancillary facilities at the Edmonton Terminal.

[2] The financial parameters for calculating the Return on Capital are consistent with the parameters used in the ITS at the time.

For greater clarity, the financial parameters used are:

	2022
Capital Structure (Debt/Equity)	55%/45%
Return on equity	9.50%
Return on debt	4.93%

[3] The depreciation rates applied are consistent with the rates used in Schedule 2 and as approved by the CER Order T0-001-2020.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement TL Schedule 1

Explanatory Notes for the Toll Design and Calculations

The basic design of Trans Mountain's tolls evolved over many years and resulted in four primary categories of service: Terminalling, Tankage, Mainline Transportation, and Other. The current tolls embody the toll design principles established in 1995 and 2009 where all volumes are subject to the same fee for the same service and represent a user-pay and cost-based allocation methodology.

As Trans Mountain's Revenue Requirement is expected to be recovered from the approved tolls each year, the division of the Revenue Requirement into a specific set of service fees that comprise the individual tolls ensures that the principles of the toll design are met. Within the Trans Mountain toll design, Receipt and Delivery Tankage and Terminalling are unbundled into individual direct and indirect use service fees at each location (Edmonton, Kamloops, Sumas, and Burnaby). The Mainline Transportation are unbundled into Mainline Transmission and different material types through the commodity surcharge/surcredit to recognize their impacts during transportation.

a. Direct Use

The fee for this service includes 100% of the cost of the asset (e.g. meters, manifolds, blending/boosters, and tanks) and any structures or improvements that support or house these assets plus an allocation of common assets (land, roads, support services, etc.) less any forecast indirect usage fees.

b. Indirect Use

To the extent that the indirect use of an asset pushes costs onto direct users, an indirect fee is applied. For example, the Indirect Use tank fee is a percentage of the applicable Direct Use fee based on the impact that an average outage for an average batch or batch train would impose on other pipeline shippers if the batch or batch train was delayed or cancelled. This estimate is 1 days' notice for a change or delay in the 6 day batch cycle or 5 days in an average month (30.5 days) which is approximately 15% of the Direct Use fee. The Indirect Use fee is applied whenever the Direct Use fee is not applied.

By subdividing the services, allocating costs and applying direct/indirect fees at each location, the tankage and terminalling credits used prior to 2009 were no longer required.

The primary categories of service are subdivided as follows:

a. Receipt Terminalling:

- i. Inlet piping and metering (direct/indirect);
- ii. Manifold transfer into receipt tanks (direct/indirect);
- iii. Manifold transfer and blending out of the receipt tanks (direct/indirect); and
- iv. Transfer to mainline through outbound boosters and metering (direct/indirect)

b. Receipt Tankage:

- i. Direct use; and
- ii. Indirect use.

c. Delivery Tankage

- i. Direct use; and
- ii. Indirect use.

d. Delivery Terminalling

- i. Pumps and manifold in/out
- ii. Meters (direct/indirect)

e. Mainline Transportation

- i. Mainline Transmission from Receipt to Delivery locations
- ii. Commodity surcharges/surcredit for different material types

f. Other

- i. Administrative or Special Service Fees
- ii. Westridge Marine Terminal Loading Charge

The pipeline tolls ("Net Tolls") are composed of all the fees for Receipt and Delivery Terminalling, Receipt and Delivery Tankage, Mainline Transportation and other special service fees or charges as appropriate for the different levels of service provided from/to the various receipt and Delivery locations. Edmonton and Kamloops are receipt locations and Kamloops, Sumas and Burnaby are Delivery locations. The Carrier also provides Terminalling service at Edmonton for volumes not entering the mainline. The toll design and the application of other fees recognize the nature of the volumes transported through the mainline and for volumes not entering mainline.

TL Schedule 1

Explanatory Notes for the Toll Design and Calculations

The following table summarizes the types of assets installed and used within the Toll Design service fees.

Location	Meters	Manifold	Blending and/or Booster	Tank
Edmonton Terminal (Receipt)	✓	✓	✓	✓
Kamloops (Receipt)	✓		✓	✓
Kamloops (Delivery)	✓	✓	✓	
Sumas (Delivery)		✓	✓	✓
Burnaby Terminal and Westridge Marine Terminal (Delivery)	✓	✓	✓	✓

Tankage, Terminalling, and Westridge Marine Terminal Fees

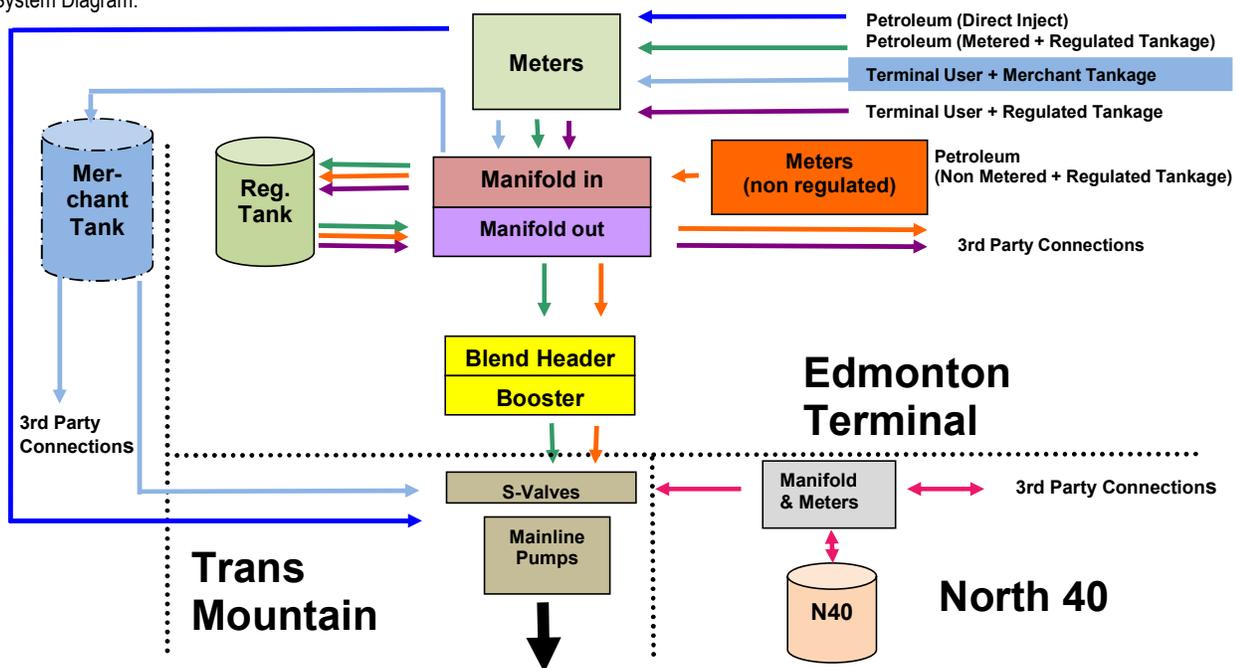
Edmonton fees (receipt location):

Edmonton Terminalling fee is first separated into two types of receipt fees: Direct and Indirect. Direct terminalling fees are comprised of four receipt service fees: i) One for inlet metering services; ii) Two for manifold transfer service into and out of tankage; and iii) One for outlet blending and booster service into the mainline. The Indirect fee recognizes that Trans Mountain has invested in facilities, incurs annual operating and maintenance capital expenses, and requires scheduling flexibility to accommodate both direct and indirect use of the Terminal assets. The Indirect fee is estimated at 15% of the Direct fee (estimated as the proportion of required scheduling flexibility in Trans Mountain's "normal" pumping schedule, i.e. 1 day in 6 days). The Indirect fee is applied to the four receipt fees individually.

Edmonton Tankage fee is separated into two types of receipt fees: Direct and Indirect. Shipper volumes that directly use the tanks will be assessed a Direct tankage fee and those that do not will be assessed an Indirect Tankage fee. The Indirect Tankage fee is set based on the same principle as outlined under the Terminalling fees, again estimated at 15%.

The receipt fees can then be combined based on use by each Shipper, current and new, requesting receipt services at Edmonton terminal.

System Diagram:



TL Schedule 1

Explanatory Notes for the Toll Design and Calculations

Kamloops fees (receipt location):

Kamloops Terminalling fees were reviewed using the principles established for Edmonton terminal. As this location is significantly less complex than the Edmonton terminal, the cost has been entirely allocated to the inlet metering service fee. Additionally, Kamloops terminalling is also used for mainline breakout and relief purposes. As a result, the terminalling costs are shared between the mainline fees, 15%, and the receipt terminalling fees, 85%.

Kamloops Tankage fees were reviewed in light of the principles used for Edmonton terminal, that being the direct and indirect use of tanks for receipt functions. Additionally, Kamloops tankage is also used for mainline breakout and relief purposes. As a result, the tankage costs are shared between the mainline fees, 5%, and the receipt tankage fees, 95%. Use of the Direct and Indirect fees are also applied to Kamloops volumes.

Kamloops fees (delivery location):

Kamloops Terminalling fee uses the costs for providing a delivery location at the Suncor (previously Petro Canada) owned site upstream of the Trans Mountain Kamloops station, rather than an allocation of the asset costs at Kamloops station.

Kamloops Tankage fee is an Indirect Use fee as no delivery tankage is provided at the Suncor site and no delivery pipeline assets were provided in lieu of tankage at this site.

Sumas fees (delivery location):

Sumas Terminalling fee is based on the functional design of Sumas station, that being to provide coincidental pumping to both the connected Trans Mountain (Puget Sound) LLC pipeline and to the Trans Mountain mainline into Burnaby, BC. When Sumas station was rebuilt, approximately 50% of the costs at this location was incurred to allow pumping to each location. As a result, 50% of the Sumas station costs are rolled into the delivery terminalling fees and the remainder are rolled into the mainline fees.

The Indirect metering fee is assessed for all volumes being transferred / delivered into Trans Mountain (Puget Sound) LLC pipeline as no meters were installed for delivery to Trans Mountain (Puget Sound) LLC.

Sumas Tankage fee is based on the costs at Sumas tank farm (a location distinct from Sumas station) and the assessment of use by volumes destined for delivery to Washington State refineries. It was determined that 90% of Sumas tank farm costs are to be rolled into the delivery tankage fee and the remainder rolled into the mainline fees.

Westridge Marine Terminal Loading Charge (delivery location):

The Westridge Marine Terminal Loading Charge recovers costs for incremental operation and maintenance incurred at Westridge Marine Terminal (both operating and capital costs).

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 2**

Summary of Forecast System Throughput Volumes

Sheet 1 of 2

Deliveries (m³/day)

Line	Source	Destination	km	Schedule & Line ref.	Used in Proposed Net Toll Calculations ^[1]		
					2023 Interim JAN to APR 120 days	2023 Proposed MAY to DEC 245 days	2023 Total Annual 365 days
1	Edmonton	Kamloops	819		1,362	1,053	1,154
2	Total Kamloops Deliveries				1,362	1,053	1,154
3	Edmonton	Sumas	1,096		35,592	31,183	32,632
4	Kamloops	Sumas	271		-	-	-
5	Total Sumas Deliveries				35,592	31,183	32,632
6	Edmonton	Burnaby	1,149		8,979	12,002	11,008
7	Kamloops	Burnaby	324		-	-	-
8	Total Burnaby Deliveries				8,979	12,002	11,008
9	Edmonton	Westridge	1,153		7,316	5,163	5,871
10	Total Westridge Marine Terminal Deliveries				7,316	5,163	5,871
11	Total Ex Edmonton/Edson Throughput				53,248	49,401	50,666
12	Total System Throughput				53,248	49,401	50,666
13	Total Heavy Crude (Ex Edmonton/Edson)				6,993	5,261	5,830
14	Percentage Heavy (Ex Edmonton/Edson)				13.13%	10.65%	11.51%
15	Hydraulic Capacity (Ex Edmonton/Edson) at Percentage Heavy ^[2]				52,522	54,118	53,479
16	Deliveries as Percentage of Hydraulic Capacity ^[3] [line 11 ÷ line 15]				101%	91%	95%
17	Total Land Deliveries				45,932	44,238	44,795
18	Total Offshore Deliveries				7,316	5,163	5,871
19	Deliveries Ex Kamloops				-	-	-
20	Total Annual System Deliveries (m ³)						18,492,928

Note(s):

[1] Proposed throughput is based on actual deliveries for January and February and nominations for March, and forecast volumes for the remainder of the year as agreed to with Shippers.

[2] Hydraulic Formula:

$$\text{For } x \leq 20.01\%, y = (809386115x^5 - 618225002x^4 + 163964466x^3 - 15952931x^2 - 193925x + 395343)/95\%/6.2898108$$

$$\text{For } x > 20.01\%, y = (-24844444x^6 + 62290768x^5 - 62888803x^4 + 31439150x^3 - 7464327x^2 + 480997x + 333140)/95\%/6.2898108$$

Where y = 100% hydraulic capacity, x = annual average % heavy injected at Edmonton and Edson and delivered out of the System.

[3] Under normal operating conditions, the System throughput will be set at a minimum 93% of hydraulic capacity at the forecast heavy composition as contemplated in Section 6 of the 2022 - 2023 ITS.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 2

Calculation of Annual Cubic Meter Kilometers ^[2]

Sheet 2 of 2

(000,000 m³km)

Line	Source	Destination	km	Used in Proposed Net Toll Calculations ^[1]		
				2023 Interim JAN to APR 120	2023 Proposed MAY to DEC 245	2023 Total Annual 365
1	Edmonton	Kamloops	819	134	211	345
2	Total Kamloops Deliveries			134	211	345
3	Edmonton	Sumas	1,096	4,679	8,370	13,049
4	Kamloops	Sumas	271	-	-	-
5	Total Sumas Deliveries			4,679	8,370	13,049
6	Edmonton	Burnaby	1,149	1,238	3,378	4,616
7	Kamloops	Burnaby	324	-	-	-
8	Total Burnaby Deliveries			1,238	3,378	4,616
9	Edmonton	Westridge	1,153	1,012	1,458	2,470
10	Total Westridge Marine Terminal Deliveries			1,012	1,458	2,470
11	Total			7,063	13,417	20,480

Note(s):

[1] Proposed throughput is based on actual deliveries for January and February and nominations for March, and forecast volumes for the remainder of the year as agreed to with Shippers.

[2] Annual cubic meter kilometers means distance (km) * volume * days in the year ÷ one million.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 3

Revenue Comparison using Interim and Proposed Tolls

Sheet 1 of 2

(units as shown)

Line	Receipt	Destination	Receipt Service	Petroleum Type	Volumes <i>(m³/day)</i>	2023 Tolls		Annual Revenue (\$'000)		
						Interim	Proposed	Interim ^[1] (\$000)	Proposed ^[2] (\$000)	Change (%)
1	Edmonton	Kamloops	All	All	1,154	All	All	6,101	5,957	-2.4%
2	Edmonton	Sumas	All	All	32,632	All	All	244,708	239,373	-2.2%
3	Edmonton	Burnaby	All	All	11,008	All	All	85,288	83,523	-2.1%
4	Edmonton	Westridge	All	All	5,871	All	All	57,759	58,272	0.9%
5	Kamloops	Sumas	All	All	-	All	All	-	-	-
6	Kamloops	Burnaby	All	All	-	All	All	-	-	-
7	Total Mainline				50,666			393,856	387,125	-1.7%
8	Partial year correction ^[4]							(11,033)	2,279	3.4%
9	Total Revenues							382,823	389,404	1.7%

Note(s):

- [1] 2023 Interim Tolls, Tariff No. 112, was approved by CER Order TO-002-2022.
2023 Interim Tolls, based on 2022 partial year Revenue Requirement, will generate approximately \$135,945K between January 1 and April 30 of 2023.
- [2] Proposed Edmonton to Westridge Tolls include the Westridge Marine Terminal Loading Charge of \$3.8269 per m³.
- [3] Number of days in year used in revenue calculation = 365
- [4] Partial year correction depends on timing of change (i.e. month) and any substantive changes in volume mix or revenues.
- [5] Calculation of percentage change in partial year tolls for 2023:

Description	Calculation	Interim	Final	Change
Mainline Tolls	TL Sch 3.2 Line 7: Revenue*1000 ÷ Volumes	21.2755	20.9415	-1.6%
Westridge Dock Bid	(i) TL Sch 9, Line 4 * -1 * 1000 divided by			
Premium Refund Sur-credit	(TL Sch 3.2, Line 7: Throughput for 120 days)	(3.5433)		
	(ii) TL Sch 9, (Line 5 - Line 3) * 1000 divided by			
	(TL Sch 3.2, Line 7: Throughput for 245 days)		(3.6533)	
Net Tolls		17.7322	17.2882	-2.5%

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

TL Schedule 4

Summary of Proposed Tolls by Crude Type

Sheet 1 of 2

(\$/m³)

Line	Receipt	Destination	Type of Service	Petroleum Type	Mainline Tolls	Surcharge (Surcredit)	Tankage		Terminalling		Westridge Loading	Net Toll
							Receipt	Delivery	Receipt	Delivery		
1	Edmonton	Edmonton	Tank Metered, Non Pipeline	All	na	-	1.1687	-	0.6037	-	-	1.7724
2	Edmonton	Edmonton	Tank Non Metered, Non Pipeline	All	na	-	1.1687	-	0.1503	-	-	1.3190
3	Edmonton	Edmonton	Metered In, 3rd Party	All	na	-	na	-	0.3642	-	-	0.3642
4	Edmonton	Kamloops	Tank Metered	Super Light	11.5281	(0.2306)	1.1687	0.3365	0.6037	0.7322	-	14.1387
5	Edmonton	Kamloops	Tank Non Metered	Super Light	11.5281	(0.2306)	1.1687	0.3365	0.3270	0.7322	-	13.8620
6	Edmonton	Kamloops	Direct Injected	Super Light	11.5281	(0.2306)	0.1753	0.3365	0.3672	0.7322	-	12.9088
7	Edmonton	Kamloops	3rd Party Injected	Super Light	11.5281	(0.2306)	0.1753	0.3365	0.0906	0.7322	-	12.6322
8	Edmonton	Sumas	Tank Metered	Light	15.4213	-	1.1687	2.2435	0.6037	0.5421	-	19.9794
9	Edmonton	Sumas	Tank Non Metered	Light	15.4213	-	1.1687	2.2435	0.3270	0.5421	-	19.7027
10	Edmonton	Sumas	Direct Injected	Light	15.4213	-	0.1753	2.2435	0.3672	0.5421	-	18.7495
11	Edmonton	Sumas	3rd Party Injected	Light	15.4213	-	0.1753	2.2435	0.0906	0.5421	-	18.4729
12	Edmonton	Sumas	Metered In, Direct Mainline	Light	15.4213	-	0.1753	2.2435	0.4002	0.5421	-	18.7825
13	Edmonton	Sumas	Tank Metered	Medium	15.4213	0.7711	1.1687	2.2435	0.6037	0.5421	-	20.7505
14	Edmonton	Sumas	Tank Non Metered	Medium	15.4213	0.7711	1.1687	2.2435	0.3270	0.5421	-	20.4738
15	Edmonton	Sumas	Direct Injected	Medium	15.4213	0.7711	0.1753	2.2435	0.3672	0.5421	-	19.5206
16	Edmonton	Sumas	3rd Party Injected	Medium	15.4213	0.7711	0.1753	2.2435	0.0906	0.5421	-	19.2440
17	Edmonton	Sumas	Metered In, Direct Mainline	Medium	15.4213	0.7711	0.1753	2.2435	0.4002	0.5421	-	19.5536
18	Edmonton	Sumas	Tank Metered	Heavy	15.4213	2.3132	1.1687	2.2435	0.6037	0.5421	-	22.2926
19	Edmonton	Sumas	Tank Non Metered	Heavy	15.4213	2.3132	1.1687	2.2435	0.3270	0.5421	-	22.0159
20	Edmonton	Sumas	Direct Injected	Heavy	15.4213	2.3132	0.1753	2.2435	0.3672	0.5421	-	21.0627
21	Edmonton	Sumas	3rd Party Injected	Heavy	15.4213	2.3132	0.1753	2.2435	0.0906	0.5421	-	20.7861
22	Edmonton	Sumas	Metered In, Direct Mainline	Heavy	15.4213	2.3132	0.1753	2.2435	0.4002	0.5421	-	21.0957
23	Edmonton	Sumas	Tank Metered	Super Heavy	15.4213	3.0843	1.1687	2.2435	0.6037	0.5421	-	23.0637
24	Edmonton	Sumas	Tank Non Metered	Super Heavy	15.4213	3.0843	1.1687	2.2435	0.3270	0.5421	-	22.7870
25	Edmonton	Sumas	Direct Injected	Super Heavy	15.4213	3.0843	0.1753	2.2435	0.3672	0.5421	-	21.8338
26	Edmonton	Sumas	3rd Party Injected	Super Heavy	15.4213	3.0843	0.1753	2.2435	0.0906	0.5421	-	21.5572
27	Edmonton	Sumas	Metered In, Direct Mainline	Super Heavy	15.4213	3.0843	0.1753	2.2435	0.4002	0.5421	-	21.8668
28	Edmonton	Burnaby	Tank Metered	Super Light	16.1708	(0.3234)	1.1687	2.2435	0.6037	0.7322	-	20.5956
29	Edmonton	Burnaby	Tank Non Metered	Super Light	16.1708	(0.3234)	1.1687	2.2435	0.3270	0.7322	-	20.3189
30	Edmonton	Burnaby	Direct Injected	Super Light	16.1708	(0.3234)	0.1753	2.2435	0.3672	0.7322	-	19.3658
31	Edmonton	Burnaby	3rd Party Injected	Super Light	16.1708	(0.3234)	0.1753	2.2435	0.0906	0.7322	-	19.0891
32	Edmonton	Burnaby	Tank Metered	Light	16.1708	-	1.1687	2.2435	0.6037	0.7322	-	20.9190
33	Edmonton	Burnaby	Tank Non Metered	Light	16.1708	-	1.1687	2.2435	0.3270	0.7322	-	20.6423
34	Edmonton	Burnaby	Direct Injected	Light	16.1708	-	0.1753	2.2435	0.3672	0.7322	-	19.6892
35	Edmonton	Burnaby	3rd Party Injected	Light	16.1708	-	0.1753	2.2435	0.0906	0.7322	-	19.4125
36	Edmonton	Burnaby	Metered In, Direct Mainline	Light	16.1708	-	0.1753	2.2435	0.4002	0.7322	-	19.7221
37	Edmonton	Westridge	Tank Metered	Light	16.2282	-	1.1687	2.2435	0.6037	0.7322	3.8269	24.8033
38	Edmonton	Westridge	Tank Non Metered	Light	16.2282	-	1.1687	2.2435	0.3270	0.7322	3.8269	24.5266
39	Edmonton	Westridge	Direct Injected	Light	16.2282	-	0.1753	2.2435	0.3672	0.7322	3.8269	23.5734
40	Edmonton	Westridge	3rd Party Injected	Light	16.2282	-	0.1753	2.2435	0.0906	0.7322	3.8269	23.2968
41	Edmonton	Westridge	Metered In, Direct Mainline	Light	16.2282	-	0.1753	2.2435	0.4002	0.7322	3.8269	23.6064
42	Edmonton	Westridge	Tank Metered	Medium	16.2282	0.8114	1.1687	2.2435	0.6037	0.7322	3.8269	25.6147
43	Edmonton	Westridge	Tank Non Metered	Medium	16.2282	0.8114	1.1687	2.2435	0.3270	0.7322	3.8269	25.3380
44	Edmonton	Westridge	Direct Injected	Medium	16.2282	0.8114	0.1753	2.2435	0.3672	0.7322	3.8269	24.3848
45	Edmonton	Westridge	3rd Party Injected	Medium	16.2282	0.8114	0.1753	2.2435	0.0906	0.7322	3.8269	24.1082
46	Edmonton	Westridge	Metered In, Direct Mainline	Medium	16.2282	0.8114	0.1753	2.2435	0.4002	0.7322	3.8269	24.4178

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 4

Summary of Proposed Tolls by Crude Type

Sheet 2 of 2
(\$/m³)

Line	Receipt	Destination	Type of Service	Petroleum Type	Mainline tolls	Surcharge (Surcredit)	Tankage		Terminalling		Westridge Loading	Net Toll
							Receipt	Delivery	Receipt	Delivery		
47	Edmonton	Westridge	Tank Metered	Heavy	16.2282	2.4342	1.1687	2.2435	0.6037	0.7322	3.8269	27.2375
48	Edmonton	Westridge	Tank Non Metered	Heavy	16.2282	2.4342	1.1687	2.2435	0.3270	0.7322	3.8269	26.9608
49	Edmonton	Westridge	Direct Injected	Heavy	16.2282	2.4342	0.1753	2.2435	0.3672	0.7322	3.8269	26.0076
50	Edmonton	Westridge	3rd Party Injected	Heavy	16.2282	2.4342	0.1753	2.2435	0.0906	0.7322	3.8269	25.7310
51	Edmonton	Westridge	Metered In, Direct Mainline	Heavy	16.2282	2.4342	0.1753	2.2435	0.4002	0.7322	3.8269	26.0406
52	Edmonton	Westridge	Tank Metered	Super Heavy	16.2282	3.2456	1.1687	2.2435	0.6037	0.7322	3.8269	28.0489
53	Edmonton	Westridge	Tank Non Metered	Super Heavy	16.2282	3.2456	1.1687	2.2435	0.3270	0.7322	3.8269	27.7722
54	Edmonton	Westridge	Direct Injected	Super Heavy	16.2282	3.2456	0.1753	2.2435	0.3672	0.7322	3.8269	26.8190
55	Edmonton	Westridge	3rd Party Injected	Super Heavy	16.2282	3.2456	0.1753	2.2435	0.0906	0.7322	3.8269	26.5424
56	Edmonton	Westridge	Metered In, Direct Mainline	Super Heavy	16.2282	3.2456	0.1753	2.2435	0.4002	0.7322	3.8269	26.8520
57	Kamloops	Sumas	Tank Metered	Light	3.8148	-	1.1687	2.2435	0.3672	0.5421	-	8.1364
58	Kamloops	Sumas	Direct Injected	Light	3.8148	-	0.1753	2.2435	0.3672	0.5421	-	7.1430
59	Kamloops	Sumas	Tank Metered	Medium	3.8148	0.1907	1.1687	2.2435	0.3672	0.5421	-	8.3271
60	Kamloops	Sumas	Direct Injected	Medium	3.8148	0.1907	0.1753	2.2435	0.3672	0.5421	-	7.3337
61	Kamloops	Sumas	Tank Metered	Heavy	3.8148	0.5722	1.1687	2.2435	0.3672	0.5421	-	8.7086
62	Kamloops	Sumas	Direct Injected	Heavy	3.8148	0.5722	0.1753	2.2435	0.3672	0.5421	-	7.7152
63	Kamloops	Burnaby	Tank Metered	Light	4.5643	-	1.1687	2.2435	0.3672	0.7322	-	9.0760
64	Kamloops	Burnaby	Direct Injected	Light	4.5643	-	0.1753	2.2435	0.3672	0.7322	-	8.0827

Note(s):

[1] Commodity surcharges/surcredits applied to Mainline charges only. Level of Toll Credits applied:

Classification:

SUPER LIGHT PETROLEUM
LIGHT PETROLEUM
MEDIUM PETROLEUM
HEAVY PETROLEUM
SUPER HEAVY PETROLEUM

Typical Representative Petroleum:

Gasoline
Rainbow, Pembina, Diesel, or as blended
SSX, or as blended
Peace Heavy, or as blended
Cold Lake, AHS, or as blended

Commodity

Surcharge (Surcredit)

-2%
0%
5%
15%
20%

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 5**

Calculation of Proposed Mainline Tolls
(units as shown)

Line	Description	Schedule & Line ref.	Toll Design Amount	Net Transmission
1	A. Calculation of Mainline Revenues (\$000)			
2	Total Revenue Requirement	[Schedule 1, line 15]		389,404
3	Partial Year Revenues	[TL Schedule 3, Sheet 2, line 7]		<u>(135,945)</u>
4	Partial Year Revenue Requirement	[TL Schedule 3, Sheet 2, line 7]		<u>253,459</u>
5	LESS:			
6	Petroleum Loading Revenues	[TL Schedule 6, sum of [i] & [ii]]	(4,841)	
7	Toll Commodity Revenues (net)		(4,226)	
8	Tankage Revenue Requirement	[TL Schedule 7, line 12]	(40,807)	
9	Terminalling Revenue Requirement ^[1]		<u>(14,716)</u>	
10	Total non-Mainline Transmission Revenues		<u>(64,591)</u>	<u>(64,591)</u>
11	Partial-year Mainline Transmission Revenue Requirement (\$000)			<u>188,868</u>
12	B. Calculation of Partial Year Mainline Transmission Charge			
13	Partial Year Cubic Meter Kilometers (000)	[TL Schedule 2, Sheet 2, line 11*1000]		13,417,492
14	Transmission Charge (\$ / m ³ km)	[line 11 ÷ line 13]		0.0140762
15	C. Summary of Mainline Transmissions Tolls (\$ / m³):			
16	Receipt	Destination	Kilometers	Transmission Toll ^[2]
17	Edmonton	Kamloops	819.0	11.5281
18	Edmonton	Sumas	1,095.6	15.4213
19	Edmonton	Burnaby	1,148.8	16.1708
20	Edmonton	Westridge Marine Terminal	1,152.9	16.2282
21	Kamloops	Sumas	271.0	3.8148
22	Kamloops	Burnaby	324.3	4.5643

Note(s):

- [1] Terminalling Revenue Requirement is comprised of total Adjusted Receipt Revenues (TL Schedule 8, Sheet 1, line 10) and total Adjusted Delivery Revenues (TL Schedule 8, Sheet 2, line 11).
- [2] Transmission Tolls equal Kilometers by destination multiplied by the Transmission Charge on line 14.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 6**

Calculation of Proposed Westridge Marine Terminal Loading Charge
(\$000 unless otherwise shown)

Line	Description	Amount
1	A. Calculation of partial year Revenue Requirement for Operating & Maintenance costs (\$000):	
2	Revenue Requirement ^[1]	6,043
3	Revenues collected during interim toll period ^[2a]	(2,075)
4	Net partial year revenues	<u>[i] 3,968</u>
5	Partial Year Volumes (m ³) [TL Schedule 3, Sheet 2, line 4]	1,265,000
6	Operating & Maintenance Fee (\$ / m³)	3.1368
7	B. Calculation of partial year Revenue Requirement for Capital Expenditures:	
8	Revenue requirement associated with Westridge Marine Terminal Upgrades ^[3]	1,423
9	Revenues collected during interim toll period ^[2b]	(550)
10	Net partial year revenues	<u>[ii] 873</u>
11	Partial Year Volumes (m ³) [TL Schedule 3, Sheet 2, line 4]	1,265,000
12	Capital Fee (\$ / m³)	0.6902
13	C. Summary of Loading Charges (\$ / m³)	
14	Operating & Maintenance Fee from Section A above	3.1368
15	Capital Improvements Fee from Section B above	0.6902
16	Proposed Loading Charge (\$ / m³)	<u>3.8269</u>

Note(s):

[1] The Revenue Requirement is comprised of two components (i) Operating and Maintenance costs and (ii) Capital expenditures. The Capital expenditures reflect improvements completed since 2007 to date.

[2] Interim Revenue Calculation:	Schedule	Volumes (m ³)	Interim Toll (\$/m ³)	Revenues (\$)
2a Operating & Maintenance Fee	[Volumes from TL Schedule 3]	877,876	2.3636	2,074,916
2b Capital Improvement Fee	[Volumes from TL Schedule 3]	877,876	0.6268	550,296

[3] Calculation of Revenue Requirement for Capital Fee (\$000)

		2022 Approved	2022 Actual	2023 Proposed
Plant	Open	17,347	17,347	17,430
	Additions	197	83	-
	Retirements	-	-	-
	Close	<u>17,544</u>	<u>17,430</u>	<u>17,430</u>
Accumulated Depreciation	Open	5,225	5,225	5,614
	Additions	390	389	418
	Close	<u>5,615</u>	<u>5,614</u>	<u>6,033</u>
Average Working Capital	[(O&M + Taxes Payable) * 15 days /365 or 366]	5	5	5
Average Rate Base		<u>12,030</u>	<u>11,973</u>	<u>11,611</u>
Equity Rate		9.50%	9.50%	9.50%
Debt Rate		4.93%	4.93%	5.50%
Equity Return	45%	514	512	496
Interest Expense	55%	326	324	351
Depreciation Expense		390	389	418
Income Tax Provision		152	151	163
Revenue Requirement		<u>1,382</u>	<u>1,377</u>	1,429
Plus prior year variance		(1)		(6)
Total Revenue Requirement		<u>1,381</u>		<u>1,423</u>

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 7

Calculation of Proposed Tankage Tolls
(units as shown)

Line	Description	Allocation Factors	Total System	Share	Total Receipt	Total Delivery	TOTAL
1	Revenues (\$000) ^[1]						
2	Annual Revenues		389,404				
3	Edmonton				20,588	-	20,588
4	Kamloops				1,910	-	1,910
5	Sumas				-	2,446	2,446
6	Burnaby				-	37,276	37,276
7	Total Annual Revenues		<u>389,404</u>		<u>22,498</u>	<u>39,721</u>	<u>62,219</u>
8	Edmonton Terminal Revenues ^[2]	64.9%		(2,197)	(1,425)	-	(1,425)
9	Total Shared Amounts			<u>(2,197)</u>	<u>(1,425)</u>	-	<u>(1,425)</u>
10	Net Revenues				<u>21,073</u>	<u>39,721</u>	<u>60,794</u>
11	Adjustment for partial year		(135,945)		(6,928)	(13,059)	(19,987)
12	Adjusted Revenues (\$000)		<u>253,459</u>		<u>14,145</u>	<u>26,662</u>	<u>40,807</u>
13	Regulated Tankage Throughput ('000 m³):						
14	Edmonton				12,103	-	
15	Kamloops				-	-	
16	Sumas				-	7,640	
17	Burnaby				-	2,941	
18	Westridge				-	1,265	
19	Total Regulated Tankage Throughput:				<u>12,103</u>	<u>11,845</u>	
20	Tankage Charges (\$/m³):				1.1687	2.2435	
21	Indirect Tankage Throughput ('000 m³):						
22	Edmonton				-	-	
23	Kamloops				-	258	
24	Sumas				-	-	
25	Burnaby				-	-	
26	Total Indirect Tankage Throughput:				<u>-</u>	<u>258</u>	
27	Indirect Tankage Charges (\$/m³):	15.0%			0.1753	0.3365	

Note(s):

[1] The Tankage Revenues have been rebased to reflect the forecast cost of operation for these locations.

[2] Edmonton Terminal Revenues are prorated between Tankage and Terminalling based on 2022 final tolls:

Receipt Tankage	1.0080	64.87%
Receipt Terminalling	0.5460	35.13%

Edmonton Terminal Revenues include 2022 variance and 2023 proposed Shippers' share of the Edmonton Terminal Revenues.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

TL Schedule 8

Calculation of Proposed Terminalling Tolls

Sheet 1 of 2. Receipt Terminalling

(units as shown)

Line	Description	Allocation Factors	Total System Share	Meters	Manifold		Boost & Blend	Total Receipt	
					In	Out			
1	Revenues (\$000) ^[1]								
2	Annual Revenues before sharing		389,404						
3	Edmonton			3,802	748	610	4,014	9,174	
4	Kamloops			2,483	-	-	-	2,483	
5	Total Annual Revenues before sharing		<u>389,404</u>	<u>6,285</u>	<u>748</u>	<u>610</u>	<u>4,014</u>	<u>11,657</u>	
6	Edmonton Terminal Revenues ^[2]	35.1%	(2,197)	(416)	(50)	(40)	(266)	(772)	
7	Total Shared Amounts		<u>(2,197)</u>	<u>(416)</u>	<u>(50)</u>	<u>(40)</u>	<u>(266)</u>	<u>(772)</u>	
8	Net Revenues			<u>5,869</u>	<u>699</u>	<u>570</u>	<u>3,748</u>	<u>10,885</u>	
9	Adjustment for partial year		(135,945)	(1,930)	(230)	(187)	(1,232)	(3,579)	
10	Adjusted Revenues (\$000)		<u>253,459</u>	<u>3,940</u>	<u>469</u>	<u>382</u>	<u>2,516</u>	<u>7,307</u>	
11	Total Throughput ('000 m³):								
12	Edmonton Receipts Tank Metered		12,103	12,103	12,103	12,103	12,103		
13	Tank Non Metered		-	-	-	-	-		
14	Kamloops Receipts Tank Metered		-	-	-	-	-		
15	Total Throughput:			<u>12,103</u>	<u>12,103</u>	<u>12,103</u>	<u>12,103</u>		
16	Direct Terminalling Charges (\$/m³):			<u>0.3255</u>	<u>0.0387</u>	<u>0.0316</u>	<u>0.2078</u>		
17	Indirect Throughput ('000 m³):								
18	Edmonton Receipts Tank Metered		12,103						
19	Kamloops Receipts Tank Metered		-	-	-	-	-		
20	Total Throughput:			<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>		
21	Indirect Terminalling Charges (\$/m³):	15.0%		<u>0.0488</u>	<u>0.0058</u>	<u>0.0047</u>	<u>0.0312</u>		
22	Summary of Receipt Terminalling Charges (\$/m³):								
23	Edmonton			0.3255	0.0387	0.0316	0.2078	0.6037	
24	Tank Metered, Pipeline			0.3255	0.0387	0.0316	0.2078	0.6037	
25	Tank Non Metered			0.0488	0.0387	0.0316	0.2078	0.3270	
26	Tank Non Metered, Non Pipeline			0.0488	0.0387	0.0316	0.0312	0.1503	
27	Metered In, Direct Mainline ^[3]			0.3255	0.0387	0.0047	0.0312	0.4002	
28	Metered In, 3rd Party ^[3]			0.3255	0.0387	na	na	0.3642	
29	Direct Injections			0.3255	0.0058	0.0047	0.0312	0.3672	
30	3rd Party Injected			0.0488	0.0058	0.0047	0.0312	0.0906	
31	Kamloops			0.3255	0.0058	0.0047	0.0312	0.3672	
32	Direct Injections			0.3255	0.0058	0.0047	0.0312	0.3672	

Note(s):

[1] The Terminalling Revenues have been rebased to reflect the forecast cost of operation for these locations.

[2] Edmonton Terminal Revenues are prorated between Tankage and Terminalling based on 2022 final tolls.

Receipt Tankage	1.0080	64.87%
Receipt Terminalling	0.5460	35.13%

Edmonton Terminal Revenues include 2022 variance and 2023 proposed Shippers' share of the Edmonton Terminal Revenues.

[3] These terminalling charges were introduced to accommodate merchant tanks within Trans Mountain's Edmonton Terminal.

Corresponding movements commenced in December 2013.

[i] Metered In, Direct Mainline represents the movements that go through regulated meters and manifold in, enter merchant tanks and then directly inject into the mainline.

[ii] Metered In, 3rd Party represents the movements that go through regulated meters and manifold in, enter merchant tanks, and then go to a 3rd Party facility. As this type of movement does not impose opportunity costs to the regulated system, no indirect fees are charged.

2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement

TL Schedule 8

Calculation of Proposed Terminalling Tolls

Sheet 2 of 2. Delivery Terminalling

(units as shown)

Line	Description	Total System	Allocation Factors	Meters	Terminal	Total
1	Revenues (\$000) ^[1]					
2	Annual Revenues before sharing	389,404				
3	Kamloops ^[2]			234	1,235	1,469
4	Sumas				3,382	3,382
5	Burnaby			1,636	4,552	6,188
6	Total Annual Revenues before sharing	<u>389,404</u>		<u>1,869</u>	<u>9,170</u>	<u>11,039</u>
7	Edmonton Terminal Revenues		n/a	-	-	-
8	Total Shared Amounts			-	-	-
9	Net Revenues			<u>1,869</u>	<u>9,170</u>	<u>11,039</u>
10	Adjustment for partial year	<u>(135,945)</u>		<u>(615)</u>	<u>(3,015)</u>	<u>(3,629)</u>
11	Adjusted Revenues (\$000)	<u><u>253,459</u></u>		<u><u>1,255</u></u>	<u><u>6,155</u></u>	<u><u>7,410</u></u>
12	Direct Throughput ('000 m³):					
13	Edmonton Receipts					
14	Tank Metered	12,103		12,103	12,103	
15	Tank Non Metered	-		-	-	
16	Direct Injections	-		-	-	
17	3rd Party Injected	-		-	-	
18	Kamloops Receipts					
19	Tank Metered	-		-	-	
20	Direct Injections	-		-	-	
21	Sumas Deliveries	(7,640)		(7,640)	-	
22	Total Throughput:			<u>4,463</u>	<u>12,103</u>	
23	Direct Terminalling Charges (\$/m³):			0.2237	0.5086	
24	Indirect Throughput ('000 m³):					
25	Sumas Deliveries	7,640		7,640	-	
26	Total Throughput:			<u>7,640</u>	<u>-</u>	
27	Indirect Terminalling Charges (\$/m³):		15%	0.0336	0.0763	
28	Summary of Delivery Terminalling Charges (\$/m³):					
29	Kamloops			0.2237	0.5086	0.7322
30	Sumas			0.0336	0.5086	0.5421
31	Burnaby			0.2237	0.5086	0.7322
32	Westridge			0.2237	0.5086	0.7322

Note(s):

- [1] The Terminalling Revenues have been rebased to reflect the forecast cost of operation for these locations.
- [2] Kamloops Metering Revenues, column titled "Meters", are calculated as the Burnaby Metering Revenue times the ratio of the number of meters at Kamloops (2) divided by the number of meters at Burnaby (14). The Kamloops Total Revenue, column titled "Total", is determined using the rate base / cost of service methodology. The Kamloops Terminal Revenue is the difference between the two.

**2023 Final Tolls calculation Pursuant to the 2022 - 2023 Incentive Toll Settlement
TL Schedule 9**

Calculation of Proposed Separate Toll for the Westridge Dock Bid Premium Refund
(units as shown)

Line	Description	Schedule & Line ref.	<u>Additional Refunds</u> Westridge/Kamloops	Total Amount		
1	A. Calculation of Partial Year Premium Refund(\$000)					
2	Total Premiums to be refunded for toll reduction (\$000)	[Schedule 8.2, line 9]		(66,857)		
3	Additional Refunds to Shippers (\$000) ^[1]		(5,872)	5,872		
4	Interim Westridge Dock Bid Premiums refunded for toll reduction (\$000)			22,641		
5	Partial Year Premiums to be Refunded (\$000)		<u>(5,872)</u>	<u>(38,344)</u>		
6	B. Calculation of Partial Year Refund Charge					
7	Partial Year Cubic Meter Kilometers	[TL Schedule 2, Sheet 2, line 11 *1000]		13,417,492		
8	Partial Year Westridge Marine Terminal Volumes (m ³)		1,265,000			
9	Partial Year Transmission Surcredit (\$ / m³km)			(0.00285778)		
10	C. Summary of Refund Surcredit Tolls (\$ / m³):					
11	Receipt	Destination	Kilometers	Surcredit	<u>Add. Refund Credit</u>	Total
12	Edmonton	Kamloops	819.0	(2.3405)		(2.3405)
13	Edmonton	Sumas	1,095.6	(3.1309)		(3.1309)
14	Edmonton	Burnaby	1,148.8	(3.2830)		(3.2830)
15	Edmonton	Westridge	1,152.9	(3.2947)	(4.6419)	(7.9366)
16	Kamloops	Sumas	271.0	(0.7745)	(2.3101)	(3.0846)
17	Kamloops	Burnaby	324.3	(0.9267)	(2.2741)	(3.2008)

Note(s):

[1] To achieve a reasonably uniform average net toll (pipeline Net Toll + Westridge Dock Bid Premium surcredit), an additional credit has been assigned to the Westridge delivered volumes and the Kamloops receipt volumes.