

Scenario A Case 8.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume less than 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	3.16	0.22	3.38	2.37	0.22	2.59
			20yr	2.84	0.22	3.06	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.43	0.31	4.74	3.32	0.31	3.63
			20yr	3.99	0.31	4.30	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.98	0.31	5.29	3.75	0.31	4.06
			20yr	4.48	0.31	4.79	3.75	0.31	4.06
		Heavy	15yr	4.98	0.37	5.35	3.75	0.37	4.12
			20yr	4.48	0.37	4.85	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	4.23	0.30	4.53	3.17	0.30	3.46
			20yr	3.80	0.30	4.10	3.17	0.30	3.46
		Heavy	15yr	4.23	0.36	4.59	3.17	0.36	3.52
			20yr	3.80	0.36	4.16	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.25	0.09	1.34	0.94	0.09	1.02
			20yr	1.13	0.09	1.22	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	1.05	0.07	1.12	0.78	0.07	0.86
			20yr	0.94	0.07	1.01	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

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TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume greater than or equal to 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	2.92	0.22	3.14	2.37	0.22	2.59
			20yr	2.63	0.22	2.85	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.10	0.31	4.41	3.32	0.31	3.63
			20yr	3.69	0.31	4.00	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.61	0.31	4.92	3.75	0.31	4.06
			20yr	4.14	0.31	4.45	3.75	0.31	4.06
		Heavy	15yr	4.61	0.37	4.98	3.75	0.37	4.12
			20yr	4.14	0.37	4.51	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	3.91	0.30	4.21	3.17	0.30	3.46
			20yr	3.52	0.30	3.82	3.17	0.30	3.46
		Heavy	15yr	3.91	0.36	4.27	3.17	0.36	3.52
			20yr	3.52	0.36	3.88	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.16	0.09	1.25	0.94	0.09	1.02
			20yr	1.04	0.09	1.13	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	0.97	0.07	1.04	0.78	0.07	0.86
			20yr	0.87	0.07	0.94	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

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TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System	Westridge Marine Terminal
Operating Expenses		
Power	91,058	-
Other Variable	-	-
<u>Total Variable Component</u>	<u>91,058</u>	<u>-</u>
Manpower	75,822	4,475
Insurance	15,058	1,168
Property Taxes	55,959	4,207
Pipeline Costs	46,642	9,332
NEB Cost Recovery	8,297	-
Other Fixed	27,566	-
<u>Total Fixed Component</u>	<u>229,344</u>	<u>19,182</u>
Total Operating Expenses	<u>320,402</u>	<u>19,182</u>
Return on Capital		
Equity	307,369.57	30,640
Debt	215,159	21,448
<u>Total Return</u>	<u>522,528</u>	<u>52,088</u>
Depreciation Expense	188,969	17,618
Total Capital Cost Recovery	<u>711,497</u>	<u>69,706</u>
Income Tax Provision		
Return on Equity	307,370	30,640
<u>Timing Differences:</u>		
Capital Cost Allowance (CCA)	(464,219)	(20,717)
Depreciation	188,969	17,618
Capitalized Interest	(174)	-
Other timing differences	(1,403)	(510)
<u>Tax Base</u>	<u>30,542</u>	<u>27,030</u>
Income Tax Provision*	-	-
Income Taxes Payable for WC	-	-
Revenue Requirement	1,031,899	88,888
Power and Other Variable Costs	91,058	-
Revenue Requirement - Excluding Power and Other Variable Cost	940,841	88,888

* Zero income tax in the first year due to net operating loss at the end of the construction period.

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TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000
Rate Base Calculation

	Expanded System	Westridge Marine Terminal
Rate Base		
Open Plant in Service	6,857,417	623,164
Open Accumulated Depreciation	(677,551)	(3,274)
Total Open Net Plant	6,179,866	619,890
 Depreciation Expense	(188,969)	(17,618)
Capital Additions	71,119	510
Close Plant in Service	6,928,536	623,674
Close Accumulated Depreciation	(866,520)	(20,892)
Total Close Net Plant	6,062,016	602,782
 Average Plant in Service	6,120,941	611,336
Average Deferred Income Taxes	-	-
Average Working Capital	26,450	1,464
Net Rate Base	6,147,391	612,801
 Working Capital Provision		
Operating Expenses	320,402	19,182
Less Insurance	(15,058)	(1,168)
Plus Income Taxes Payable	-	-
Cash Cost of Service	305,344	18,014
Provision for cash requirement	12,548	740
Average Prepaid Expenses	9,336	724
Average Inventory	4,566	-
Average Working Capital Provision	26,450	1,464
 Book Basis		
Opening Balance	1,550,632	622,529
Opening Balance - Expansion	5,320,278	
Additions	71,119	510
Additions - Expansion	-	
Closing Balance	1,621,751	623,039
Closing Balance - Expansion	5,320,278	
 Depreciation Expense	47,449	17,618
Depreciation Expense - Expansion	141,519	
Accumulated Depreciation	732,755	20,535
Accumulated Depreciation - Expansion	141,519	
Net Book Value	6,067,755	602,504
 Tax Basis		
Opening Balance	518,376	517,934
Opening Balance - Expansion	4,403,931	
Additions	67,971	-
Additions - Expansion	-	
CCA	45,846	20,717
CCA - Expansion	418,373	
Closing Balance	540,501	497,217
Closing Balance - Expansion	3,985,558	

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TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Breakdown of Revenue Requirements for Comparison with Indicative Tolls

	Fixed Component		Power and Other Variable Cost		
	Expanded System	Westridge Marine	Total	Light	Heavy
	Excl. Westridge	Terminal		Volume	Volume
Expanded System	940,841		91,058		
Westridge Marine Terminal	(88,888)	88,888	-		
Total	851,953	88,888	91,058		
COST OF SERVICE FIRST-YEAR TOLL					
bbl/day			707,500	211,500	496,000
bbl kms per year (000,000)	294,784	247,414	294,784	88,123	206,661
Heavy / Light premium					20%
Light-Equivalent bbl kms per year (000,000)			336,116	88,123	247,993
Cost per bbl km (000,000)	2.89	0.36	0.27	0.27	0.33
Toll (\$/bbl)					
Edmonton to Kamloops	2.37			0.22	0.27
Edmonton to Sumas	3.17			0.30	0.36
Edmonton to Burnaby	3.32			0.31	0.37
Edmonton to Westridge	3.33	0.41		0.31	0.37
Kamloops to Sumas	0.78			0.07	0.09
Kamloops to Burnaby	0.94			0.09	0.11

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TRANS MOUNTAIN EXPANSION WORKSHEET: STANDARD ASSUMPTIONS

CALENDAR:

1 Year	2018
2 Days in Year	365

ASSUMPTIONS:

3 Equity Structure	50.0%
4 Debt Structure	50.0%
5 Equity Rate	10.0%
6 Debt Rate	7.0%
7 Weighted Equity	5.00%
8 Weighted Debt	3.5%
9 Income Tax Rate	25.0%
10 Accounting depreciation rate (base system)	3.06%
11 Accounting depreciation rate (expansion system)	2.66%
12 Accounting depreciation rate (dock system)	2.83%
13 Tax depreciation rate (base system)	8.30%
14 Tax depreciation rate (expansion system)	9.50%
15 Tax depreciation rate (dock system)	4.00%

Working Capital:

16 Days for Working Capital	15
17 Prepaid factor applied to insurance	62.0%

Volume/Distance

	Pipeline kms	Light YR1	Heavy YR1	Total Volume (bpd)	bbl kms / yr (000,000)
18 Edmonton to Kamloops	819.0	9,000	-	9,000	2,690
19 Edmonton to Sumas	1,095.5	45,000	40,000	85,000	33,988
20 Edmonton to Burnaby	1,148.7	25,500	-	25,500	10,692
21 Edmonton to Westridge	1,152.8	132,000	456,000	588,000	247,414
22 Kamloops to Sumas	271.0	-	-	-	-
23 Kamloops to Burnaby	324.2	-	-	-	-
24 Total		211,500	496,000	707,500	294,784

Inputs:

Scenario A:

- Same basic parameters or capital structure, ROE, interest and depreciation as in CAPP 1.3

- 2.5% annual escalation to the entire fixed toll for 20 years

Case #8:

- Full committed volumes (707,500 bpd) and zero uncommitted volumes.

Capital Structure (%)

1 Equity	50%
2 Debt	50%
3 Cost of Debt	7.0%
4 Toll Annual Inflator	2.5%

Operating Cost Annual Inflators

5 Manpower	4%
6 Insurance	4%
7 Property Taxes	4%
8 Pipeline Costs	4%
9 NEB Cost Recovery	4%
10 Other Fixed	4%

Committed Volume

From:	To:	kbpd
11 Edmonton	Kamloops	9
12 Edmonton	Sumas	85
13 Edmonton	Burnaby	26
14 Edmonton	Westridge	588
15 Kamloops	Sumas	0
16 Kamloops	Burnaby	0
17	Total	708

Uncommitted Volume

From:	To:	kbpd
18 Edmonton	Kamloops	0
19 Edmonton	Sumas	0
20 Edmonton	Burnaby	0
21 Edmonton	Westridge	0
22 Kamloops	Sumas	0
23 Kamloops	Burnaby	0
24	Total	0

Outputs:

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Annual ROE	10.0%	10.5%	11.1%	11.7%	12.4%	13.1%	13.9%	14.0%	13.4%	14.2%	15.0%	15.8%	16.8%	17.8%	19.0%	20.3%	21.7%	23.2%	24.9%	26.8%
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2 Fixed Toll (\$/bbl)																				
Edmonton to Westridge Dock Toll	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99

Projected Average ROE
15.6%
Average Fixed Toll (\$/bbl)
4.74

Committed Volume:

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From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Edmonton	Kamloops	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2 Edmonton	Sumas	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
3 Edmonton	Burnaby	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
4 Edmonton	Westridge	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0
5 Kamloops	Sumas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Kamloops	Burnaby	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Total	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5

Fixed Tolls:

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
8 Edmonton	Kamloops	2.37	2.43	2.49	2.55	2.61	2.68	2.74	2.81	2.88	2.96	3.03	3.11	3.18	3.26	3.34	3.43	3.51	3.60	3.69	3.78
9 Edmonton	Sumas	3.17	3.25	3.33	3.41	3.49	3.58	3.67	3.76	3.86	3.95	4.05	4.15	4.26	4.36	4.47	4.59	4.70	4.82	4.94	5.06
10 Edmonton	Burnaby	3.32	3.40	3.49	3.58	3.66	3.76	3.85	3.95	4.04	4.15	4.25	4.36	4.46	4.58	4.69	4.81	4.93	5.05	5.18	5.31
11 Edmonton	Westridge	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99
12 Kamloops	Sumas	0.78	0.80	0.82	0.84	0.86	0.89	0.91	0.93	0.95	0.98	1.00	1.03	1.05	1.08	1.11	1.13	1.16	1.19	1.22	1.25
13 Kamloops	Burnaby	0.94	0.96	0.98	1.01	1.03	1.06	1.09	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.36	1.39	1.43	1.46	1.50

Revenue (\$M):

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
14 Edmonton	Kamloops	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	12	12	12	12
15 Edmonton	Sumas	98	101	103	106	108	111	114	117	120	123	126	129	132	135	139	142	146	149	153	157
16 Edmonton	Burnaby	31	32	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
17 Edmonton	Westridge	804	824	845	866	887	910	932	956	980	1,004	1,029	1,055	1,081	1,108	1,136	1,164	1,193	1,223	1,254	1,285
18 Kamloops	Sumas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Kamloops	Burnaby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Total Revenue	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504

Spot Shipments (kbpd):																						
From:		To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1	Edmonton	Kamloops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Edmonton	Sumas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Edmonton	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Edmonton	Westridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Kamloops	Sumas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Kamloops	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Volume (kbpd)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
8	Available Capacity (kbpd)		890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890
9	Committed Capacity (kbpd)		708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708
10	Total Spot Capacity		183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
11	85% of Available Capacity		757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757
12	TMPL Spot Capacity		49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
13	Revenue Sharing Capacity		134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
14	Spot Revenue Sharing %		50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
15	TMPL Volume Share (kbpd)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Spot Revenue Sharing Volume (kbpd)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TMPL Spot Revenue (\$M)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Shipper Spot Revenue (\$M)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spot Tolls (10% premium to 15 year toll)																						
From:		To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
19	Edmonton	Kamloops	2.60	2.67	2.74	2.80	2.87	2.95	3.02	3.09	3.17	3.25	3.33	3.42	3.50	3.59	3.68	3.77	3.87	3.96	4.06	4.16
20	Edmonton	Sumas	3.48	3.57	3.66	3.75	3.84	3.94	4.04	4.14	4.24	4.35	4.46	4.57	4.68	4.80	4.92	5.04	5.17	5.30	5.43	5.57
21	Edmonton	Burnaby	3.65	3.74	3.84	3.93	4.03	4.13	4.24	4.34	4.45	4.56	4.67	4.79	4.91	5.03	5.16	5.29	5.42	5.56	5.70	5.84
22	Edmonton	Westridge	4.12	4.22	4.33	4.44	4.55	4.66	4.78	4.90	5.02	5.15	5.27	5.41	5.54	5.68	5.82	5.97	6.12	6.27	6.43	6.59
23	Kamloops	Sumas	0.86	0.88	0.91	0.93	0.95	0.97	1.00	1.02	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38
24	Kamloops	Burnaby	1.03	1.06	1.08	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.35	1.39	1.42	1.46	1.49	1.53	1.57	1.61	1.65
25	Weighted Average Toll (\$/bbf)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Income Statement (\$M)																				
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Net Rate Base	6,147	6,029	5,910	5,789	5,667	5,542	5,396	5,265	5,131	4,996	4,858	4,718	4,576	4,432	4,285	4,137	3,986	3,833	3,679	3,522
2 % Equity	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
3 % Debt	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
4 Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
5 Revenue: Contract	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504
6 Revenue: Spot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Fixed Operating Costs	229	239	248	258	269	280	291	303	315	328	342	356	370	385	401	417	434	452	470	489
8 EBITDA	711	726	740	755	770	785	800	815	831	847	863	879	895	912	929	946	963	980	997	1,015
9 Depreciation	189	191	193	195	198	200	202	204	206	209	211	213	215	217	219	222	224	226	228	230
10 Interest	215.16	211	207	203	198	194	189	184	180	175	170	165	160	155	150	145	140	134	129	123
11 Total	404	402	400	398	396	394	391	388	386	383	381	378	375	372	369	366	363	360	357	354
12 EBT	307	324	340	357	374	391	409	427	445	463	482	501	520	540	559	579	599	620	640	661
13 Taxes	-	6	11	17	23	28	35	59	100	110	119	127	136	144	152	160	168	175	183	190
14 Earnings	307	318	329	340	351	362	374	368	345	354	363	373	384	395	407	419	432	444	458	471
15 ROE	10.0%	10.5%	11.1%	11.7%	12.4%	13.1%	13.9%	14.0%	13.4%	14.2%	15.0%	15.8%	16.8%	17.8%	19.0%	20.3%	21.7%	23.2%	24.9%	26.8%
																				Average ROE
																				15.6%

Fixed Operating Costs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1 Manpower	75.8	79.0	82.3	85.8	89.4	93.1	97.1	101.1	105.4	109.8	114.4	119.2	124.2	129.4	134.9	140.5	146.4	152.6	159.0	165.7
2 Insurance	15.1	15.7	16.3	16.9	17.6	18.3	19.1	19.8	20.6	21.4	22.3	23.2	24.1	25.1	26.1	27.1	28.2	29.3	30.5	31.7
3 Property Taxes	56.0	58.2	60.5	62.9	65.5	68.1	70.8	73.6	76.6	79.6	82.8	86.1	89.6	93.2	96.9	100.8	104.8	109.0	113.4	117.9
4 Pipeline Costs	46.6	48.5	50.4	52.5	54.6	56.7	59.0	61.4	63.8	66.4	69.0	71.8	74.7	77.7	80.8	84.0	87.4	90.9	94.5	98.3
5 NEB Cost Recovery	8.3	8.6	9.0	9.3	9.7	10.1	10.5	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.4	14.9	15.5	16.2	16.8	17.5
6 Other Fixed	27.6	28.7	29.8	31.0	32.2	33.5	34.9	36.3	37.7	39.2	40.8	42.4	44.1	45.9	47.7	49.6	51.6	53.7	55.8	58.1
7 Total	229.3	238.7	248.4	258.5	269.0	279.9	291.3	303.2	315.5	328.3	341.7	355.6	370.0	385.1	400.7	417.0	434.0	451.6	470.0	489.1

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RATE BASE & INCOME TAX
CURRENCY: CA\$000

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Operating Expenses								
1 Power	91,058	-	94,700		98,488		102,428	
2 Other Variable	-	-						
3 <u>Total Variable Component</u>	91,058	-	94,700		98,488		102,428	
4 Manpower	72,917	4,475						
5 Insurance	15,058	1,168						
6 Property Taxes	53,849	3,951						
7 Pipeline Costs	43,371	8,682						
8 NEB Cost Recovery	6,927	-						
9 Other Fixed	18,779	-						
10 <u>Total Fixed Component</u>	210,901	18,276	238,669	19,007	248,374	19,767	258,474	20,558
11 <u>Total Operating Expenses</u>	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
Return on Capital								
12 Equity 10%	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
13 Debt 7%	215,159	21,583	211,027	21,255	206,861	20,928	202,629	20,600
14 <u>Total Return</u>	522,528	52,416	512,493	51,619	502,377	50,824	492,099	50,029
15 Depreciation Expense	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
16 <u>Total Capital Cost Recovery</u>	711,497	62,272	703,638	61,489	695,698	60,707	687,597	59,925
Income Tax Provision								
17 Return on Equity	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
Timing Differences:								
18 Capital Cost Allowance (CCA)	(464,219)	(20,717)	(426,310)	(19,889)	(392,024)	(19,093)	(361,016)	(18,329)
19 Depreciation	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
20 Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-
21 Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)
22 <u>Tax Base</u>	30,425	19,505	64,608	19,878	95,119	20,219	122,258	20,528
23 <u>Income Tax Provision*</u>	-	-	-	-	-	-	-	-
24 <u>Income Taxes Payable for WC</u>	-	-	-	-	-	-	-	-
25 Revenue Requirement	1,031,899	81,454	1,037,008	80,496	1,042,561	80,474	1,048,498	80,483
26 Power and Other Variable Costs	91,058	-	94,700	-	98,488	-	102,428	-
Revenue Requirement - Excluding								
27 <u>Power and Other Variable Cost</u>	940,841	81,454	942,308	80,496	944,072	80,474	946,071	80,483

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Rate Base Calculation								
	Expanded System	Westridge Marine Terminal						
Rate Base								
28 Open Plant in Service	6,857,417	623,164	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565
29 Open Accumulated Depreciation	(677,551)	(3,274)	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)
30 Total Open Net Plant	6,179,866	619,890	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683
31 Depreciation Expense	(188,969)	(9,856)	(191,145)	(9,869)	(193,321)	(9,883)	(195,497)	(9,896)
32 Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467
33 Close Plant in Service	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565	7,141,893	625,032
34 Close Accumulated Depreciation	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)	(1,446,483)	(42,778)
35 Total Close Net Plant	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683	5,695,410	582,254
36 Average Plant in Service	6,120,941	615,195	6,002,003	605,799	5,880,889	596,390	5,757,599	586,968
37 Average Deferred Income Taxes	-	-	-	-	-	-	-	-
38 Average Working Capital	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
39 Net Rate Base	6,147,391	616,660	6,029,335	607,284	5,910,316	597,934	5,789,404	588,574
Working Capital Provision								
40 Operating Expenses	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
41 Less Insurance	(15,058)	(1,168)	(15,660)	(1,215)	(18,320)	(1,263)	(21,432)	(1,314)
42 Plus Income Taxes Payable	-	-	-	-	-	-	-	-
43 Cash Cost of Service	305,344	18,014	317,709	17,792	328,542	18,504	339,469	19,244
44 Provision for cash requirement	12,548	740	13,057	731	13,502	760	13,951	791
45 Average Prepaid Expenses	9,336	724	9,709	753	11,359	783	13,288	815
46 Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-
47 Average Working Capital Provision	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
Book Basis								
48 Opening Balance	1,550,632	348,278	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679
49 Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
50 Additions	71,119	467	71,119	467	71,119	467	71,119	467
51 Additions - Expansion	-		-		-		-	
52 Closing Balance	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679	1,835,108	350,146
53 Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
54 Depreciation Expense	47,449	9,856	49,626	9,869	51,802	9,883	53,978	9,896
55 Depreciation Expense - Expansion	141,519		141,519		141,519		141,519	
56 Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
57 Accumulated Depreciation - Expansion	107,735		249,254		107,735		107,735	
58 Net Book Value	6,101,539	335,972	6,031,139	336,439	6,243,777	336,906	6,314,896	337,373

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Tax Basis								
59 Opening Balance	518,373	517,934	540,498	497,217	560,787	477,328	579,392	458,235
60 Opening Balance - Expansion	4,403,931		3,985,558		3,606,930		3,264,271	
61 Additions	67,971	-	67,971	-	67,971	-	67,971	-
62 Additions - Expansion	-		-		-		-	
63 CCA	45,846	20,717	47,682	19,889	49,366	19,093	50,910	18,329
64 CCA - Expansion	418,373		378,628		342,658		310,106	
65 Closing Balance	540,498	497,217	560,787	477,328	579,392	458,235	596,453	439,905
66 Closing Balance - Expansion	3,985,558		3,606,930		3,264,271		2,954,166	
Tax loss Carry fwd								
67 Opening	916,347		889,070		827,610		735,640	
68 Used	30,425		64,608		95,119		122,258	
69 Increase	3,148		3,148		3,148		3,148	
70 Closing	889,070		827,610		735,640		616,530	

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Breakdown of Revenue Requirements for Comparison with Indicative Tolls								
	Fixed Component		Power and Other Variable Cost		Power and Other Variable Cost			
	Expanded System Excl. Westridge	Westridge Marine Terminal		Heavy Volume				
			Total		Total			
Expanded System	940,841		942,308		94,700			
Westridge Marine Terminal	(88,888)	88,888	(80,496)	80,496	-			
Total	851,953	88,888	861,812		94,700			
COST OF SERVICE FIRST-YEAR TOLL								
bbl/day			707,500	496,000	-		-	
bbl kms per year (000,000)	294,784	247,414	294,784	206,661	294,784	#	#DIV/0!	
Heavy / Light premium				20%			20%	
Light-Equivalent bbl kms per year (000,000)			336,116	247,993	#DIV/0!	#	#DIV/0!	
Cost per bbl km (000,000)	2.89	0.35927	2.56	3.08	#DIV/0!	#	#DIV/0!	
Toll (\$/bbl)								
Edmonton to Kamloops	2.36699		2.42616	-	-	#	#DIV/0!	
Edmonton to Sumas	3.16610		3.24525	-	-	#	#DIV/0!	
Edmonton to Burnaby	3.31985		3.40285	-	-	#	#DIV/0!	
Edmonton to Westridge	3.33170	0.41	3.41500	0.41	-	#	#DIV/0!	
Kamloops to Sumas	0.78322		0.80280	-	-	#	#DIV/0!	
Kamloops to Burnaby	0.93697		0.96039	-	-	#	#DIV/0!	

tax RB depr

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Operating Expenses									
Power	106,525		110,786		115,217		119,826		124,619
Other Variable									
<u>Total Variable Component</u>	<u>106,525</u>		<u>110,786</u>		<u>115,217</u>		<u>119,826</u>		<u>124,619</u>
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>268,984</u>	<u>21,380</u>	<u>279,922</u>	<u>22,236</u>	<u>291,306</u>	<u>23,125</u>	<u>303,152</u>	<u>24,050</u>	<u>315,480</u>
Total Operating Expenses	<u>375,509</u>	<u>21,380</u>	<u>390,708</u>	<u>22,236</u>	<u>406,523</u>	<u>23,125</u>	<u>422,978</u>	<u>24,050</u>	<u>440,099</u>
Return on Capital									
Equity 10%	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Debt 7%	<u>198,333</u>	<u>20,272</u>	<u>193,973</u>	<u>19,944</u>	<u>188,858</u>	<u>19,615</u>	<u>184,262</u>	<u>19,286</u>	<u>179,590</u>
Total Return	481,665	49,232	471,078	48,435	458,655	47,636	447,493	46,837	436,148
Depreciation Expense	<u>197,674</u>	<u>9,909</u>	<u>199,850</u>	<u>9,922</u>	<u>202,026</u>	<u>9,936</u>	<u>204,202</u>	<u>9,949</u>	<u>206,379</u>
Total Capital Cost Recovery	<u>679,339</u>	<u>59,141</u>	<u>670,928</u>	<u>58,357</u>	<u>660,681</u>	<u>57,572</u>	<u>651,695</u>	<u>56,786</u>	<u>642,527</u>
Income Tax Provision									
Return on Equity	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Timing Differences:									
Capital Cost Allowance (CCA)	(332,972)	(17,596)	(307,609)	(16,892)	(284,671)	(16,217)	(263,927)	(15,568)	(245,166)
Depreciation	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>
Tax Base	146,340	20,806	167,651	21,054	185,458	21,273	201,813	21,465	216,076
Income Tax Provision*	-	-	-	-	-	-	24,046	7,155	70,976
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,054,848	80,522	1,061,636	80,593	1,067,204	80,697	1,098,720	87,991	1,153,602
Power and Other Variable Costs	106,525	-	110,786	-	115,217	-	119,826	-	124,619
Revenue Requirement - Excluding Power and Other Variable Cost	948,323	80,522	950,850	80,593	951,987	80,697	978,894	87,991	1,028,983

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,141,893	625,032	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369
Open Accumulated Depreciation	(1,446,483)	(42,778)	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)
Total Open Net Plant	5,695,410	582,254	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133
Depreciation Expense	(197,674)	(9,909)	(199,850)	(9,922)	(202,026)	(9,936)	(204,202)	(9,949)	(206,379)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369	626,900	7,497,488
Close Accumulated Depreciation	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)	(82,494)	(2,456,614)
Total Close Net Plant	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133	544,406	5,040,874
Average Plant in Service	5,632,132	577,533	5,504,489	568,084	5,374,670	558,622	5,242,675	549,147	5,108,504
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Net Rate Base	5,666,645	579,202	5,542,092	569,820	5,395,943	560,428	5,264,624	551,025	5,131,156
Working Capital Provision									
Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Less Insurance	(25,073)	(1,366)	(29,331)	(1,421)	-	(1,478)	-	(1,537)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	350,437	20,014	361,377	20,814	406,523	21,647	422,978	22,513	440,099
Provision for cash requirement	14,402	822	14,851	855	16,706	890	17,383	925	18,086
Average Prepaid Expenses	15,545	847	18,186	881	-	916	-	953	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Book Basis									
Opening Balance	1,835,108	350,146	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584	352,014	2,190,703
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	56,154	9,909	58,331	9,922	60,507	9,936	62,683	9,949	64,859
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	6,386,015	337,840	6,457,134	338,307	6,528,253	338,774	6,599,372	339,241	6,670,491

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Tax Basis									
Opening Balance	596,453	439,905	612,097	422,309	626,443	405,417	639,599	389,200	651,662
Opening Balance - Expansion	2,954,166		2,673,520		2,419,535		2,189,680		1,981,660
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	52,326	17,596	53,625	16,892	54,816	16,217	55,907	15,568	56,909
CCA - Expansion	280,646		253,984		229,856		208,020		188,258
Closing Balance	612,097	422,309	626,443	405,417	639,599	389,200	651,662	373,632	662,725
Closing Balance - Expansion	2,673,520		2,419,535		2,189,680		1,981,660		1,793,402
Tax loss Carry fwd									
Opening	616,530		473,338		308,835		126,525		-
Used	146,340		167,651		185,458		129,673		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	473,338		308,835		126,525		-		-

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Operating Expenses									
Power		129,604		134,788		140,180		145,787	
Other Variable									
<u>Total Variable Component</u>		<u>129,604</u>		<u>134,788</u>		<u>140,180</u>		<u>145,787</u>	
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>25,012</u>	<u>328,310</u>	<u>26,012</u>	<u>341,662</u>	<u>27,053</u>	<u>355,558</u>	<u>28,135</u>	<u>370,018</u>	<u>29,260</u>
Total Operating Expenses	<u>25,012</u>	<u>457,914</u>	<u>26,012</u>	<u>476,450</u>	<u>27,053</u>	<u>495,737</u>	<u>28,135</u>	<u>515,805</u>	<u>29,260</u>
Return on Capital									
Equity 10%	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Debt 7%	<u>18,956</u>	<u>174,844</u>	<u>18,627</u>	<u>170,022</u>	<u>18,296</u>	<u>165,125</u>	<u>17,966</u>	<u>160,154</u>	<u>17,635</u>
Total Return	<u>46,037</u>	<u>424,621</u>	<u>45,236</u>	<u>412,911</u>	<u>44,434</u>	<u>401,019</u>	<u>43,631</u>	<u>388,945</u>	<u>42,828</u>
Depreciation Expense	<u>9,962</u>	<u>208,555</u>	<u>9,975</u>	<u>210,731</u>	<u>9,988</u>	<u>212,907</u>	<u>10,002</u>	<u>215,084</u>	<u>10,015</u>
Total Capital Cost Recovery	<u>55,999</u>	<u>633,176</u>	<u>55,211</u>	<u>623,642</u>	<u>54,423</u>	<u>613,926</u>	<u>53,633</u>	<u>604,028</u>	<u>52,843</u>
Income Tax Provision									
Return on Equity	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Timing Differences:									
Capital Cost Allowance (CCA)	(14,945)	(228,200)	(14,347)	(212,857)	(13,774)	(198,981)	(13,223)	(186,433)	(12,694)
Depreciation	9,962	208,555	9,975	210,731	9,988	212,907	10,002	215,084	10,015
Capitalized Interest	-	(125)	-	(125)	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	21,630	228,438	21,770	239,069	21,886	248,126	21,978	255,748	22,047
Income Tax Provision*	7,210	75,097	7,257	78,640	7,295	81,659	7,326	84,200	7,349
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	88,221	1,166,187	88,480	1,178,733	88,771	1,191,323	89,094	1,204,033	89,452
Power and Other Variable Costs	-	129,604	-	134,788	-	140,180	-	145,787	-
Revenue Requirement - Excluding Power and Other Variable Cost	88,221	1,036,583	88,480	1,043,945	88,771	1,051,143	89,094	1,058,247	89,452

* Zero income tax in the first year due to n

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Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Rate Base Calculation									
Rate Base									
Open Plant in Service	626,900	7,497,488	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768
Open Accumulated Depreciation	(82,494)	(2,456,614)	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)
Total Open Net Plant	544,406	5,040,874	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347
Depreciation Expense	(9,962)	(208,555)	(9,975)	(210,731)	(9,988)	(212,907)	(10,002)	(215,084)	(10,015)
Capital Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Close Plant in Service	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768	7,781,964	629,235
Close Accumulated Depreciation	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)	(3,303,891)	(132,436)
Total Close Net Plant	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347	4,478,073	496,799
Average Plant in Service	539,658	4,972,156	530,157	4,833,632	520,642	4,692,931	511,114	4,550,055	501,573
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Net Rate Base	541,612	4,995,540	532,188	4,857,778	522,755	4,717,870	513,311	4,575,818	503,858
Working Capital Provision									
Operating Expenses	25,012	457,914	26,012	476,450	27,053	495,737	28,135	515,805	29,260
Less Insurance	(1,598)	-	(1,662)	-	(1,729)	-	(1,798)	-	(1,870)
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	23,413	457,914	24,350	476,450	25,324	495,737	26,337	515,805	27,390
Provision for cash requirement	962	18,818	1,001	19,580	1,041	20,373	1,082	21,197	1,126
Average Prepaid Expenses	991	-	1,031	-	1,072	-	1,115	-	1,159
Average Inventory	-	4,566	-	4,566	-	4,566	-	4,566	-
Average Working Capital Provision	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Book Basis									
Opening Balance	352,014	2,190,703	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882
Opening Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Additions - Expansion		-		-		-		-	
Closing Balance	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882	2,475,179	354,349
Closing Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Depreciation Expense	9,962	67,036	9,975	69,212	9,988	71,388	10,002	73,564	10,015
Depreciation Expense - Expansion		141,519		141,519		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735		107,735		107,735	
Net Book Value	339,708	6,741,610	340,175	6,812,729	340,642	6,883,848	341,109	6,954,967	341,576

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Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Tax Basis									
Opening Balance	373,632	662,725	358,687	672,869	344,339	682,171	330,566	690,701	317,343
Opening Balance - Expansion		1,793,402		1,623,029		1,468,841		1,329,301	
Additions	-	67,971	-	67,971	-	67,971	-	67,971	-
Additions - Expansion		-		-		-		-	
CCA	14,945	57,827	14,347	58,669	13,774	59,441	13,223	60,149	12,694
CCA - Expansion		170,373		154,188		139,540		126,284	
Closing Balance	358,687	672,869	344,339	682,171	330,566	690,701	317,343	698,523	304,649
Closing Balance - Expansion		1,623,029		1,468,841		1,329,301		1,203,018	
Tax loss Carry fwd									
Opening		-		-		-		-	
Used		3,148		3,148		3,148		3,148	
Increase		3,148		3,148		3,148		3,148	
Closing		-		-		-		-	

Cost of Service Revenue Requirement

Breakdown of Revenue Requirements 1

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
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TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Operating Expenses									
Power	151,618		157,683		163,990		170,550		177,372
Other Variable									
Total Variable Component	151,618		157,683		163,990		170,550		177,372
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
Total Fixed Component	385,068	30,431	400,729	31,648	417,028	32,914	433,990	34,231	451,643
Total Operating Expenses	536,686	30,431	558,412	31,648	581,018	32,914	604,540	34,231	629,015
Return on Capital									
Equity 10%	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Debt 7%	155,107	17,304	149,985	16,972	144,788	16,640	139,517	16,308	134,171
Total Return	376,688	42,024	364,249	41,218	351,629	40,412	338,827	39,606	325,843
Depreciation Expense	217,260	10,028	219,436	10,041	221,612	10,055	223,789	10,068	225,965
Total Capital Cost Recovery	593,948	52,052	583,686	51,260	573,241	50,467	562,615	49,673	551,808
Income Tax Provision									
Return on Equity	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Timing Differences:									
Capital Cost Allowance (CCA)	(175,085)	(12,186)	(164,823)	(11,699)	(155,543)	(11,231)	(147,151)	(10,781)	(139,563)
Depreciation	217,260	10,028	219,436	10,041	221,612	10,055	223,789	10,068	225,965
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)
Tax Base	262,062	22,095	267,184	22,122	271,216	22,129	274,253	22,117	276,380
Income Tax Provision*	86,305	7,365	88,012	7,374	89,356	7,376	90,368	7,372	91,077
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,216,938	89,847	1,230,110	90,282	1,243,616	90,757	1,257,524	91,276	1,271,900
Power and Other Variable Costs	151,618	-	157,683	-	163,990	-	170,550	-	177,372
Revenue Requirement - Excluding Power and Other Variable Cost	1,065,320	89,847	1,072,427	90,282	1,079,625	90,757	1,086,974	91,276	1,094,528

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,781,964	629,235	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440
Open Accumulated Depreciation	(3,303,891)	(132,436)	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)
Total Open Net Plant	4,478,073	496,799	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452
Depreciation Expense	(217,260)	(10,028)	(219,436)	(10,041)	(221,612)	(10,055)	(223,789)	(10,068)	(225,965)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440	631,103	8,137,559
Close Accumulated Depreciation	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)	(172,628)	(4,411,953)
Total Close Net Plant	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452	458,475	3,725,606
Average Plant in Service	4,405,002	492,018	4,257,773	482,450	4,108,368	472,870	3,956,786	463,275	3,803,029
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Net Rate Base	4,431,624	494,395	4,285,288	484,922	4,136,811	475,440	3,986,197	465,949	3,833,445
Working Capital Provision									
Operating Expenses	536,686	30,431	558,412	31,648	581,018	32,914	604,540	34,231	629,015
Less Insurance	-	(1,945)	-	(2,023)	-	(2,104)	-	(2,188)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	536,686	28,486	558,412	29,626	581,018	30,811	604,540	32,043	629,015
Provision for cash requirement	22,056	1,171	22,948	1,217	23,877	1,266	24,844	1,317	25,850
Average Prepaid Expenses	-	1,206	-	1,254	-	1,304	-	1,356	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Book Basis									
Opening Balance	2,475,179	354,349	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655	356,217	2,830,774
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	75,740	10,028	77,917	10,041	80,093	10,055	82,269	10,068	84,445
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	7,026,086	342,043	7,097,205	342,510	7,168,324	342,977	7,239,443	343,444	7,310,562

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Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Tax Basis									
Opening Balance	698,523	304,649	705,696	292,464	712,273	280,765	718,305	269,534	723,836
Opening Balance - Expansion	1,203,018		1,088,731		985,302		891,698		806,987
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	60,798	12,186	61,394	11,699	61,939	11,231	62,440	10,781	62,899
CCA - Expansion	114,287		103,429		93,604		84,711		76,664
Closing Balance	705,696	292,464	712,273	280,765	718,305	269,534	723,836	258,753	728,907
Closing Balance - Expansion	1,088,731		985,302		891,698		806,987		730,323
Tax loss Carry fwd									
Opening	-		-		-		-		-
Used	3,148		3,148		3,148		3,148		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	-		-		-		-		-

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Operating Expenses					
Power		184,467		191,845	
Other Variable					
<u>Total Variable Component</u>		<u>184,467</u>		<u>191,845</u>	
Manpower					
Insurance					
Property Taxes					
Pipeline Costs					
NEB Cost Recovery					
Other Fixed					
<u>Total Fixed Component</u>	<u>35,600</u>	<u>470,014</u>	<u>37,024</u>	<u>489,132</u>	<u>38,505</u>
Total Operating Expenses	<u>35,600</u>	<u>654,480</u>	<u>37,024</u>	<u>680,978</u>	<u>38,505</u>
Return on Capital					
Equity 10%	22,822	183,928	22,347	176,077	21,871
Debt 7%	<u>15,976</u>	<u>128,750</u>	<u>15,643</u>	<u>123,254</u>	<u>15,310</u>
Total Return	38,798	312,677	37,990	299,331	37,181
Depreciation Expense	<u>10,081</u>	<u>228,141</u>	<u>10,094</u>	<u>230,317</u>	<u>10,107</u>
Total Capital Cost Recovery	<u>48,879</u>	<u>540,818</u>	<u>48,084</u>	<u>529,648</u>	<u>47,288</u>
Income Tax Provision					
Return on Equity	22,822	183,928	22,347	176,077	21,871
Timing Differences:					
Capital Cost Allowance (CCA)	(10,350)	(132,701)	(9,936)	(126,496)	(9,539)
Depreciation	10,081	228,141	10,094	230,317	10,107
Capitalized Interest	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	22,086	277,674	22,038	278,204	21,973
Income Tax Provision*	7,362	91,509	7,346	91,685	7,324
Income Taxes Payable for WC	-	-	-	-	-
Revenue Requirement	91,841	1,286,808	92,454	1,302,311	93,117
Power and Other Variable Costs	-	184,467	-	191,845	-
Revenue Requirement - Excluding Power and Other Variable Cost	91,841	1,102,341	92,454	1,110,466	93,117

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* Zero income tax in the first year due to n

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Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Rate Base Calculation					
Rate Base					
Open Plant in Service	631,103	8,137,559	631,570	8,208,678	632,037
Open Accumulated Depreciation	(172,628)	(4,411,953)	(182,709)	(4,640,094)	(192,803)
Total Open Net Plant	458,475	3,725,606	448,861	3,568,584	439,234
Depreciation Expense	(10,081)	(228,141)	(10,094)	(230,317)	(10,107)
Capital Additions	467	71,119	467	71,119	467
Close Plant in Service	631,570	8,208,678	632,037	8,279,797	632,504
Close Accumulated Depreciation	(182,709)	(4,640,094)	(192,803)	(4,870,412)	(202,910)
Total Close Net Plant	448,861	3,568,584	439,234	3,409,385	429,594
Average Plant in Service	453,668	3,647,095	444,048	3,488,985	434,414
Average Deferred Income Taxes	-	-	-	-	-
Average Working Capital	2,780	31,462	2,891	32,551	3,007
Net Rate Base	456,448	3,678,557	446,939	3,521,536	437,421
Working Capital Provision					
Operating Expenses	35,600	654,480	37,024	680,978	38,505
Less Insurance	(2,275)	-	(2,366)	-	(2,461)
Plus Income Taxes Payable	-	-	-	-	-
Cash Cost of Service	33,325	654,480	34,658	680,978	36,044
Provision for cash requirement	1,370	26,896	1,424	27,985	1,481
Average Prepaid Expenses	1,411	-	1,467	-	1,526
Average Inventory	-	4,566	-	4,566	-
Average Working Capital Provision	2,780	31,462	2,891	32,551	3,007
Book Basis					
Opening Balance	356,217	2,830,774	356,684	2,901,893	357,151
Opening Balance - Expansion		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467
Additions - Expansion		-		-	
Closing Balance	356,684	2,901,893	357,151	2,973,012	357,618
Closing Balance - Expansion		5,320,278		5,320,278	
Depreciation Expense	10,081	86,622	10,094	88,798	10,107
Depreciation Expense - Expansion		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735	
Net Book Value	343,911	7,381,681	344,378	7,452,800	344,845

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Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Tax Basis					
Opening Balance	258,753	728,907	248,403	733,558	238,467
Opening Balance - Expansion		730,323		660,942	
Additions	-	67,971	-	67,971	-
Additions - Expansion		-		-	
CCA	10,350	63,320	9,936	63,706	9,539
CCA - Expansion		69,381		62,790	
Closing Balance	248,403	733,558	238,467	737,823	228,928
Closing Balance - Expansion		660,942		598,153	
Tax loss Carry fwd					
Opening		-		-	
Used		3,148		3,148	
Increase		3,148		3,148	
Closing		-		-	

Cost of Service Revenue Requirement

Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
---------------------------------	------------------------	---------------------------------	------------------------	---------------------------------

Breakdown of Revenue Requirements 1

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL

bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume less than 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	3.16	0.22	3.38	2.37	0.22	2.59
			20yr	2.84	0.22	3.06	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.43	0.31	4.74	3.32	0.31	3.63
			20yr	3.99	0.31	4.30	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.98	0.31	5.29	3.75	0.31	4.06
			20yr	4.48	0.31	4.79	3.75	0.31	4.06
		Heavy	15yr	4.98	0.37	5.35	3.75	0.37	4.12
			20yr	4.48	0.37	4.85	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	4.23	0.30	4.53	3.17	0.30	3.46
			20yr	3.80	0.30	4.10	3.17	0.30	3.46
		Heavy	15yr	4.23	0.36	4.59	3.17	0.36	3.52
			20yr	3.80	0.36	4.16	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.25	0.09	1.34	0.94	0.09	1.02
			20yr	1.13	0.09	1.22	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	1.05	0.07	1.12	0.78	0.07	0.86
			20yr	0.94	0.07	1.01	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume greater than or equal to 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	2.92	0.22	3.14	2.37	0.22	2.59
			20yr	2.63	0.22	2.85	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.10	0.31	4.41	3.32	0.31	3.63
			20yr	3.69	0.31	4.00	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.61	0.31	4.92	3.75	0.31	4.06
			20yr	4.14	0.31	4.45	3.75	0.31	4.06
		Heavy	15yr	4.61	0.37	4.98	3.75	0.37	4.12
			20yr	4.14	0.37	4.51	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	3.91	0.30	4.21	3.17	0.30	3.46
			20yr	3.52	0.30	3.82	3.17	0.30	3.46
		Heavy	15yr	3.91	0.36	4.27	3.17	0.36	3.52
			20yr	3.52	0.36	3.88	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.16	0.09	1.25	0.94	0.09	1.02
			20yr	1.04	0.09	1.13	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	0.97	0.07	1.04	0.78	0.07	0.86
			20yr	0.87	0.07	0.94	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System	Westridge Marine Terminal
Operating Expenses		
Power	91,058	-
Other Variable	-	-
<u>Total Variable Component</u>	<u>91,058</u>	<u>-</u>
Manpower	75,822	4,475
Insurance	15,058	1,168
Property Taxes	55,959	4,207
Pipeline Costs	46,642	9,332
NEB Cost Recovery	8,297	-
Other Fixed	27,566	-
<u>Total Fixed Component</u>	<u>229,344</u>	<u>19,182</u>
Total Operating Expenses	<u>320,402</u>	<u>19,182</u>
Return on Capital		
Equity	307,369.57	30,640
Debt	215,159	21,448
<u>Total Return</u>	<u>522,528</u>	<u>52,088</u>
Depreciation Expense	188,969	17,618
<u>Total Capital Cost Recovery</u>	<u>711,497</u>	<u>69,706</u>
Income Tax Provision		
Return on Equity	307,370	30,640
<u>Timing Differences:</u>		
Capital Cost Allowance (CCA)	(464,219)	(20,717)
Depreciation	188,969	17,618
Capitalized Interest	(174)	-
Other timing differences	(1,403)	(510)
<u>Tax Base</u>	<u>30,542</u>	<u>27,030</u>
Income Tax Provision*	-	-
Income Taxes Payable for WC	-	-
Revenue Requirement	1,031,899	88,888
Power and Other Variable Costs	91,058	-
Revenue Requirement - Excluding Power and Other Variable Cost	940,841	88,888

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000
Rate Base Calculation

	Expanded System	Westridge Marine Terminal
Rate Base		
Open Plant in Service	6,857,417	623,164
Open Accumulated Depreciation	(677,551)	(3,274)
Total Open Net Plant	6,179,866	619,890
Depreciation Expense	(188,969)	(17,618)
Capital Additions	71,119	510
Close Plant in Service	6,928,536	623,674
Close Accumulated Depreciation	(866,520)	(20,892)
Total Close Net Plant	6,062,016	602,782
Average Plant in Service	6,120,941	611,336
Average Deferred Income Taxes	-	-
Average Working Capital	26,450	1,464
Net Rate Base	6,147,391	612,801
Working Capital Provision		
Operating Expenses	320,402	19,182
Less Insurance	(15,058)	(1,168)
Plus Income Taxes Payable	-	-
Cash Cost of Service	305,344	18,014
Provision for cash requirement	12,548	740
Average Prepaid Expenses	9,336	724
Average Inventory	4,566	-
Average Working Capital Provision	26,450	1,464
Book Basis		
Opening Balance	1,550,632	622,529
Opening Balance - Expansion	5,320,278	
Additions	71,119	510
Additions - Expansion	-	
Closing Balance	1,621,751	623,039
Closing Balance - Expansion	5,320,278	
Depreciation Expense	47,449	17,618
Depreciation Expense - Expansion	141,519	
Accumulated Depreciation	732,755	20,535
Accumulated Depreciation - Expansion	141,519	
Net Book Value	6,067,755	602,504
Tax Basis		
Opening Balance	518,376	517,934
Opening Balance - Expansion	4,403,931	
Additions	67,971	-
Additions - Expansion	-	
CCA	45,846	20,717
CCA - Expansion	418,373	
Closing Balance	540,501	497,217
Closing Balance - Expansion	3,985,558	

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Breakdown of Revenue Requirements for Comparison with Indicative Tolls

	Fixed Component		Power and Other Variable Cost		
	Expanded System	Westridge Marine	Total	Light	Heavy
	Excl. Westridge	Terminal		Volume	Volume
Expanded System	940,841		91,058		
Westridge Marine Terminal	(88,888)	88,888	-		
Total	851,953	88,888	91,058		
COST OF SERVICE FIRST-YEAR TOLL					
bbl/day			707,500	211,500	496,000
bbl kms per year (000,000)	294,784	247,414	294,784	88,123	206,661
Heavy / Light premium					20%
Light-Equivalent bbl kms per year (000,000)			336,116	88,123	247,993
Cost per bbl km (000,000)	2.89	0.36	0.27	0.27	0.33
Toll (\$/bbl)					
Edmonton to Kamloops	2.37			0.22	0.27
Edmonton to Sumas	3.17			0.30	0.36
Edmonton to Burnaby	3.32			0.31	0.37
Edmonton to Westridge	3.33	0.41		0.31	0.37
Kamloops to Sumas	0.78			0.07	0.09
Kamloops to Burnaby	0.94			0.09	0.11

Scenario A Case 9.xlsx

TRANS MOUNTAIN EXPANSION WORKSHEET: STANDARD ASSUMPTIONS

CALENDAR:

1 Year	2018
2 Days in Year	365

ASSUMPTIONS:

3 Equity Structure	50.0%
4 Debt Structure	50.0%
5 Equity Rate	10.0%
6 Debt Rate	7.0%
7 Weighted Equity	5.00%
8 Weighted Debt	3.5%
9 Income Tax Rate	25.0%
10 Accounting depreciation rate (base system)	3.06%
11 Accounting depreciation rate (expansion system)	2.66%
12 Accounting depreciation rate (dock system)	2.83%
13 Tax depreciation rate (base system)	8.30%
14 Tax depreciation rate (expansion system)	9.50%
15 Tax depreciation rate (dock system)	4.00%

Working Capital:

16 Days for Working Capital	15
17 Prepaid factor applied to insurance	62.0%

Volume/Distance

	Pipeline kms	Light YR1	Heavy YR1	Total Volume (bpd)	bbl kms / yr (000,000)
18 Edmonton to Kamloops	819.0	9,000	-	9,000	2,690
19 Edmonton to Sumas	1,095.5	45,000	40,000	85,000	33,988
20 Edmonton to Burnaby	1,148.7	25,500	-	25,500	10,692
21 Edmonton to Westridge	1,152.8	132,000	456,000	588,000	247,414
22 Kamloops to Sumas	271.0	-	-	-	-
23 Kamloops to Burnaby	324.2	-	-	-	-
24 Total		211,500	496,000	707,500	294,784

Inputs:

Scenario A:

- Same basic parameters or capital structure, ROE, interest and depreciation as in CAPP 1.3

- 2.5% annual escalation to the entire fixed toll for 20 years

Case #9:

- Full committed volumes (707,500 bpd) and zero uncommitted volumes plus 50,000 bpd of uncommitted volumes.

Capital Structure (%)

1 Equity	50%
2 Debt	50%
3 Cost of Debt	7.0%
4 Toll Annual Inflator	2.5%

Operating Cost Annual Inflators

5 Manpower	4%
6 Insurance	4%
7 Property Taxes	4%
8 Pipeline Costs	4%
9 NEB Cost Recovery	4%
10 Other Fixed	4%

Committed Volume

From:	To:	kbpd
11 Edmonton	Kamloops	9
12 Edmonton	Sumas	85
13 Edmonton	Burnaby	26
14 Edmonton	Westridge	588
15 Kamloops	Sumas	0
16 Kamloops	Burnaby	0
17	Total	708

Uncommitted Volume

From:	To:	kbpd
18 Edmonton	Kamloops	0
19 Edmonton	Sumas	25
20 Edmonton	Burnaby	0
21 Edmonton	Westridge	25
22 Kamloops	Sumas	0
23 Kamloops	Burnaby	0
24	Total	50

Outputs:

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Annual ROE	12.2%	12.3%	13.0%	13.7%	14.4%	15.2%	16.1%	16.3%	15.9%	16.7%	17.7%	18.7%	19.8%	21.0%	22.4%	23.9%	25.5%	27.3%	29.3%	31.4%
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2 Fixed Toll (\$/bbl)																				
Edmonton to Westridge Dock Toll	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99

Projected Average ROE
18.4%
Average Fixed Toll (\$/bbl)
4.74

Committed Volume:

Scenario A Case 9.xlsx

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Edmonton	Kamloops	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2 Edmonton	Sumas	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
3 Edmonton	Burnaby	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
4 Edmonton	Westridge	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0
5 Kamloops	Sumas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Kamloops	Burnaby	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Total	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5

Fixed Tolls:

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
8 Edmonton	Kamloops	2.37	2.43	2.49	2.55	2.61	2.68	2.74	2.81	2.88	2.96	3.03	3.11	3.18	3.26	3.34	3.43	3.51	3.60	3.69	3.78
9 Edmonton	Sumas	3.17	3.25	3.33	3.41	3.49	3.58	3.67	3.76	3.86	3.95	4.05	4.15	4.26	4.36	4.47	4.59	4.70	4.82	4.94	5.06
10 Edmonton	Burnaby	3.32	3.40	3.49	3.58	3.66	3.76	3.85	3.95	4.04	4.15	4.25	4.36	4.46	4.58	4.69	4.81	4.93	5.05	5.18	5.31
11 Edmonton	Westridge	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99
12 Kamloops	Sumas	0.78	0.80	0.82	0.84	0.86	0.89	0.91	0.93	0.95	0.98	1.00	1.03	1.05	1.08	1.11	1.13	1.16	1.19	1.22	1.25
13 Kamloops	Burnaby	0.94	0.96	0.98	1.01	1.03	1.06	1.09	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.36	1.39	1.43	1.46	1.50

Revenue (\$M):

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
14 Edmonton	Kamloops	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	12	12	12	12
15 Edmonton	Sumas	98	101	103	106	108	111	114	117	120	123	126	129	132	135	139	142	146	149	153	157
16 Edmonton	Burnaby	31	32	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
17 Edmonton	Westridge	804	824	845	866	887	910	932	956	980	1,004	1,029	1,055	1,081	1,108	1,136	1,164	1,193	1,223	1,254	1,285
18 Kamloops	Sumas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Kamloops	Burnaby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Total Revenue	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504

Spot Shipments (kbpd):																						
From:		To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1	Edmonton	Kamloops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Edmonton	Sumas	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
3	Edmonton	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Edmonton	Westridge	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
5	Kamloops	Sumas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Kamloops	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Volume (kbpd)		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
8	Available Capacity (kbpd)		890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890
9	Committed Capacity (kbpd)		708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708
10	Total Spot Capacity		183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
11	85% of Available Capacity		757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757
12	TMPL Spot Capacity		49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
13	Revenue Sharing Capacity		134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
14	Spot Revenue Sharing %		50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
15	TMPL Volume Share (kbpd)		49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5
16	Spot Revenue Sharing Volume (kbpd)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
17	TMPL Spot Revenue (\$M)		69	70	72	74	76	78	80	82	84	86	88	90	92	95	97	99	102	105	107	110
18	Shipper Spot Revenue (\$M)		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spot Tolls (10% premium to 15 year toll)																						
From:		To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
19	Edmonton	Kamloops	2.60	2.67	2.74	2.80	2.87	2.95	3.02	3.09	3.17	3.25	3.33	3.42	3.50	3.59	3.68	3.77	3.87	3.96	4.06	4.16
20	Edmonton	Sumas	3.48	3.57	3.66	3.75	3.84	3.94	4.04	4.14	4.24	4.35	4.46	4.57	4.68	4.80	4.92	5.04	5.17	5.30	5.43	5.57
21	Edmonton	Burnaby	3.65	3.74	3.84	3.93	4.03	4.13	4.24	4.34	4.45	4.56	4.67	4.79	4.91	5.03	5.16	5.29	5.42	5.56	5.70	5.84
22	Edmonton	Westridge	4.12	4.22	4.33	4.44	4.55	4.66	4.78	4.90	5.02	5.15	5.27	5.41	5.54	5.68	5.82	5.97	6.12	6.27	6.43	6.59
23	Kamloops	Sumas	0.86	0.88	0.91	0.93	0.95	0.97	1.00	1.02	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38
24	Kamloops	Burnaby	1.03	1.06	1.08	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.35	1.39	1.42	1.46	1.49	1.53	1.57	1.61	1.65
25	Weighted Average Toll (\$/bbf)		3.80	3.90	3.99	4.09	4.20	4.30	4.41	4.52	4.63	4.75	4.87	4.99	5.11	5.24	5.37	5.51	5.64	5.78	5.93	6.08

Income Statement (\$M)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Net Rate Base	6,147	6,029	5,910	5,789	5,667	5,542	5,396	5,265	5,131	4,996	4,858	4,718	4,576	4,432	4,285	4,137	3,986	3,833	3,679	3,522
2 % Equity	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
3 % Debt	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
4 Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
5 Revenue: Contract	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504
6 Revenue: Spot	69	70	72	74	76	78	80	82	84	86	88	90	92	95	97	99	102	105	107	110
7 Fixed Operating Costs	229	239	248	258	269	280	291	303	315	328	342	356	370	385	401	417	434	452	470	489
8 EBITDA	780	796	812	829	845	862	879	897	915	932	951	969	988	1,007	1,026	1,045	1,065	1,084	1,105	1,125
9 Depreciation	189	191	193	195	198	200	202	204	206	209	211	213	215	217	219	222	224	226	228	230
10 Interest	215.16	211	207	203	198	194	189	184	180	175	170	165	160	155	150	145	140	134	129	123
11 Total	404	402	400	398	396	394	391	388	386	383	381	378	375	372	369	366	363	360	357	354
12 EBT	376	394	412	431	449	468	489	508	529	549	570	591	612	634	656	679	701	724	748	771
13 Taxes	-	23	29	35	42	48	55	79	121	131	141	150	159	168	177	185	193	201	210	218
14 Earnings	376	371	383	395	408	421	434	429	407	418	429	441	453	466	480	494	508	523	538	554
15 ROE	12.2%	12.3%	13.0%	13.7%	14.4%	15.2%	16.1%	16.3%	15.9%	16.7%	17.7%	18.7%	19.8%	21.0%	22.4%	23.9%	25.5%	27.3%	29.3%	31.4%

Average ROE
18.4%

Fixed Operating Costs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1 Manpower	75.8	79.0	82.3	85.8	89.4	93.1	97.1	101.1	105.4	109.8	114.4	119.2	124.2	129.4	134.9	140.5	146.4	152.6	159.0	165.7
2 Insurance	15.1	15.7	16.3	16.9	17.6	18.3	19.1	19.8	20.6	21.4	22.3	23.2	24.1	25.1	26.1	27.1	28.2	29.3	30.5	31.7
3 Property Taxes	56.0	58.2	60.5	62.9	65.5	68.1	70.8	73.6	76.6	79.6	82.8	86.1	89.6	93.2	96.9	100.8	104.8	109.0	113.4	117.9
4 Pipeline Costs	46.6	48.5	50.4	52.5	54.6	56.7	59.0	61.4	63.8	66.4	69.0	71.8	74.7	77.7	80.8	84.0	87.4	90.9	94.5	98.3
5 NEB Cost Recovery	8.3	8.6	9.0	9.3	9.7	10.1	10.5	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.4	14.9	15.5	16.2	16.8	17.5
6 Other Fixed	27.6	28.7	29.8	31.0	32.2	33.5	34.9	36.3	37.7	39.2	40.8	42.4	44.1	45.9	47.7	49.6	51.6	53.7	55.8	58.1
7 Total	229.3	238.7	248.4	258.5	269.0	279.9	291.3	303.2	315.5	328.3	341.7	355.6	370.0	385.1	400.7	417.0	434.0	451.6	470.0	489.1

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RATE BASE & INCOME TAX
CURRENCY: CA\$000

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Operating Expenses								
1 Power	91,058	-	94,700		98,488		102,428	
2 Other Variable	-	-						
3 <u>Total Variable Component</u>	91,058	-	94,700		98,488		102,428	
4 Manpower	72,917	4,475						
5 Insurance	15,058	1,168						
6 Property Taxes	53,849	3,951						
7 Pipeline Costs	43,371	8,682						
8 NEB Cost Recovery	6,927	-						
9 Other Fixed	18,779	-						
10 <u>Total Fixed Component</u>	210,901	18,276	238,669	19,007	248,374	19,767	258,474	20,558
11 <u>Total Operating Expenses</u>	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
Return on Capital								
12 Equity 10%	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
13 Debt 7%	215,159	21,583	211,027	21,255	206,861	20,928	202,629	20,600
14 <u>Total Return</u>	522,528	52,416	512,493	51,619	502,377	50,824	492,099	50,029
15 Depreciation Expense	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
16 <u>Total Capital Cost Recovery</u>	711,497	62,272	703,638	61,489	695,698	60,707	687,597	59,925
Income Tax Provision								
17 Return on Equity	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
Timing Differences:								
18 Capital Cost Allowance (CCA)	(464,219)	(20,717)	(426,310)	(19,889)	(392,024)	(19,093)	(361,016)	(18,329)
19 Depreciation	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
20 Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-
21 Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)
22 <u>Tax Base</u>	30,425	19,505	64,608	19,878	95,119	20,219	122,258	20,528
23 <u>Income Tax Provision*</u>	-	-	-	-	-	-	-	-
24 <u>Income Taxes Payable for WC</u>	-	-	-	-	-	-	-	-
25 Revenue Requirement	1,031,899	81,454	1,037,008	80,496	1,042,561	80,474	1,048,498	80,483
26 Power and Other Variable Costs	91,058	-	94,700	-	98,488	-	102,428	-
Revenue Requirement - Excluding								
27 <u>Power and Other Variable Cost</u>	940,841	81,454	942,308	80,496	944,072	80,474	946,071	80,483

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Rate Base Calculation								
	Expanded System	Westridge Marine Terminal						
Rate Base								
28 Open Plant in Service	6,857,417	623,164	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565
29 Open Accumulated Depreciation	(677,551)	(3,274)	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)
30 Total Open Net Plant	6,179,866	619,890	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683
31 Depreciation Expense	(188,969)	(9,856)	(191,145)	(9,869)	(193,321)	(9,883)	(195,497)	(9,896)
32 Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467
33 Close Plant in Service	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565	7,141,893	625,032
34 Close Accumulated Depreciation	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)	(1,446,483)	(42,778)
35 Total Close Net Plant	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683	5,695,410	582,254
36 Average Plant in Service	6,120,941	615,195	6,002,003	605,799	5,880,889	596,390	5,757,599	586,968
37 Average Deferred Income Taxes	-	-	-	-	-	-	-	-
38 Average Working Capital	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
39 Net Rate Base	6,147,391	616,660	6,029,335	607,284	5,910,316	597,934	5,789,404	588,574
Working Capital Provision								
40 Operating Expenses	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
41 Less Insurance	(15,058)	(1,168)	(15,660)	(1,215)	(18,320)	(1,263)	(21,432)	(1,314)
42 Plus Income Taxes Payable	-	-	-	-	-	-	-	-
43 Cash Cost of Service	305,344	18,014	317,709	17,792	328,542	18,504	339,469	19,244
44 Provision for cash requirement	12,548	740	13,057	731	13,502	760	13,951	791
45 Average Prepaid Expenses	9,336	724	9,709	753	11,359	783	13,288	815
46 Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-
47 Average Working Capital Provision	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
Book Basis								
48 Opening Balance	1,550,632	348,278	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679
49 Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
50 Additions	71,119	467	71,119	467	71,119	467	71,119	467
51 Additions - Expansion	-		-		-		-	
52 Closing Balance	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679	1,835,108	350,146
53 Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
54 Depreciation Expense	47,449	9,856	49,626	9,869	51,802	9,883	53,978	9,896
55 Depreciation Expense - Expansion	141,519		141,519		141,519		141,519	
56 Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
57 Accumulated Depreciation - Expansion	107,735		249,254		107,735		107,735	
58 Net Book Value	6,101,539	335,972	6,031,139	336,439	6,243,777	336,906	6,314,896	337,373

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Tax Basis								
59 Opening Balance	518,373	517,934	540,498	497,217	560,787	477,328	579,392	458,235
60 Opening Balance - Expansion	4,403,931		3,985,558		3,606,930		3,264,271	
61 Additions	67,971	-	67,971	-	67,971	-	67,971	-
62 Additions - Expansion	-		-		-		-	
63 CCA	45,846	20,717	47,682	19,889	49,366	19,093	50,910	18,329
64 CCA - Expansion	418,373		378,628		342,658		310,106	
65 Closing Balance	540,498	497,217	560,787	477,328	579,392	458,235	596,453	439,905
66 Closing Balance - Expansion	3,985,558		3,606,930		3,264,271		2,954,166	
Tax loss Carry fwd								
67 Opening	916,347		889,070		827,610		735,640	
68 Used	30,425		64,608		95,119		122,258	
69 Increase	3,148		3,148		3,148		3,148	
70 Closing	889,070		827,610		735,640		616,530	

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Breakdown of Revenue Requirements for Comparison with Indicative Tolls								
	Fixed Component		Power and Other Variable Cost		Power and Other Variable Cost			
	Expanded System Excl. Westridge	Westridge Marine Terminal		Heavy Volume				
			Total		Total			
Expanded System	940,841		942,308		94,700			
Westridge Marine Terminal	(88,888)	88,888	(80,496)	80,496	-			
Total	851,953	88,888	861,812		94,700			
COST OF SERVICE FIRST-YEAR TOLL								
bbl/day			707,500	496,000	-		-	
bbl kms per year (000,000)	294,784	247,414	294,784	206,661	294,784	#	#DIV/0!	
Heavy / Light premium				20%			20%	
Light-Equivalent bbl kms per year (000,000)			336,116	247,993	#DIV/0!	#	#DIV/0!	
Cost per bbl km (000,000)	2.89	0.35927	2.56	3.08	#DIV/0!	#	#DIV/0!	
Toll (\$/bbl)								
Edmonton to Kamloops	2.36699		2.42616	-	-	#	#DIV/0!	
Edmonton to Sumas	3.16610		3.24525	-	-	#	#DIV/0!	
Edmonton to Burnaby	3.31985		3.40285	-	-	#	#DIV/0!	
Edmonton to Westridge	3.33170	0.41	3.41500	0.41	-	#	#DIV/0!	
Kamloops to Sumas	0.78322		0.80280	-	-	#	#DIV/0!	
Kamloops to Burnaby	0.93697		0.96039	-	-	#	#DIV/0!	

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Operating Expenses									
Power	106,525		110,786		115,217		119,826		124,619
Other Variable									
Total Variable Component	106,525		110,786		115,217		119,826		124,619
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
Total Fixed Component	268,984	21,380	279,922	22,236	291,306	23,125	303,152	24,050	315,480
Total Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Return on Capital									
Equity 10%	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Debt 7%	198,333	20,272	193,973	19,944	188,858	19,615	184,262	19,286	179,590
Total Return	481,665	49,232	471,078	48,435	458,655	47,636	447,493	46,837	436,148
Depreciation Expense	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Total Capital Cost Recovery	679,339	59,141	670,928	58,357	660,681	57,572	651,695	56,786	642,527
Income Tax Provision									
Return on Equity	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Timing Differences:									
Capital Cost Allowance (CCA)	(332,972)	(17,596)	(307,609)	(16,892)	(284,671)	(16,217)	(263,927)	(15,568)	(245,166)
Depreciation	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)
Tax Base	146,340	20,806	167,651	21,054	185,458	21,273	201,813	21,465	216,076
Income Tax Provision*	-	-	-	-	-	-	24,046	7,155	70,976
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,054,848	80,522	1,061,636	80,593	1,067,204	80,697	1,098,720	87,991	1,153,602
Power and Other Variable Costs	106,525	-	110,786	-	115,217	-	119,826	-	124,619
Revenue Requirement - Excluding Power and Other Variable Cost	948,323	80,522	950,850	80,593	951,987	80,697	978,894	87,991	1,028,983

* Zero income tax in the first year due to n

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,141,893	625,032	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369
Open Accumulated Depreciation	(1,446,483)	(42,778)	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)
Total Open Net Plant	5,695,410	582,254	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133
Depreciation Expense	(197,674)	(9,909)	(199,850)	(9,922)	(202,026)	(9,936)	(204,202)	(9,949)	(206,379)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369	626,900	7,497,488
Close Accumulated Depreciation	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)	(82,494)	(2,456,614)
Total Close Net Plant	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133	544,406	5,040,874
Average Plant in Service	5,632,132	577,533	5,504,489	568,084	5,374,670	558,622	5,242,675	549,147	5,108,504
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Net Rate Base	5,666,645	579,202	5,542,092	569,820	5,395,943	560,428	5,264,624	551,025	5,131,156
Working Capital Provision									
Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Less Insurance	(25,073)	(1,366)	(29,331)	(1,421)	-	(1,478)	-	(1,537)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	350,437	20,014	361,377	20,814	406,523	21,647	422,978	22,513	440,099
Provision for cash requirement	14,402	822	14,851	855	16,706	890	17,383	925	18,086
Average Prepaid Expenses	15,545	847	18,186	881	-	916	-	953	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Book Basis									
Opening Balance	1,835,108	350,146	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584	352,014	2,190,703
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	56,154	9,909	58,331	9,922	60,507	9,936	62,683	9,949	64,859
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	6,386,015	337,840	6,457,134	338,307	6,528,253	338,774	6,599,372	339,241	6,670,491

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Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Tax Basis									
Opening Balance	596,453	439,905	612,097	422,309	626,443	405,417	639,599	389,200	651,662
Opening Balance - Expansion	2,954,166		2,673,520		2,419,535		2,189,680		1,981,660
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	52,326	17,596	53,625	16,892	54,816	16,217	55,907	15,568	56,909
CCA - Expansion	280,646		253,984		229,856		208,020		188,258
Closing Balance	612,097	422,309	626,443	405,417	639,599	389,200	651,662	373,632	662,725
Closing Balance - Expansion	2,673,520		2,419,535		2,189,680		1,981,660		1,793,402
Tax loss Carry fwd									
Opening	616,530		473,338		308,835		126,525		-
Used	146,340		167,651		185,458		129,673		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	473,338		308,835		126,525		-		-

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Operating Expenses									
Power		129,604		134,788		140,180		145,787	
Other Variable									
<u>Total Variable Component</u>		<u>129,604</u>		<u>134,788</u>		<u>140,180</u>		<u>145,787</u>	
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>25,012</u>	<u>328,310</u>	<u>26,012</u>	<u>341,662</u>	<u>27,053</u>	<u>355,558</u>	<u>28,135</u>	<u>370,018</u>	<u>29,260</u>
Total Operating Expenses	<u>25,012</u>	<u>457,914</u>	<u>26,012</u>	<u>476,450</u>	<u>27,053</u>	<u>495,737</u>	<u>28,135</u>	<u>515,805</u>	<u>29,260</u>
Return on Capital									
Equity 10%	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Debt 7%	<u>18,956</u>	<u>174,844</u>	<u>18,627</u>	<u>170,022</u>	<u>18,296</u>	<u>165,125</u>	<u>17,966</u>	<u>160,154</u>	<u>17,635</u>
Total Return	<u>46,037</u>	<u>424,621</u>	<u>45,236</u>	<u>412,911</u>	<u>44,434</u>	<u>401,019</u>	<u>43,631</u>	<u>388,945</u>	<u>42,828</u>
Depreciation Expense	<u>9,962</u>	<u>208,555</u>	<u>9,975</u>	<u>210,731</u>	<u>9,988</u>	<u>212,907</u>	<u>10,002</u>	<u>215,084</u>	<u>10,015</u>
Total Capital Cost Recovery	<u>55,999</u>	<u>633,176</u>	<u>55,211</u>	<u>623,642</u>	<u>54,423</u>	<u>613,926</u>	<u>53,633</u>	<u>604,028</u>	<u>52,843</u>
Income Tax Provision									
Return on Equity	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Timing Differences:									
Capital Cost Allowance (CCA)	(14,945)	(228,200)	(14,347)	(212,857)	(13,774)	(198,981)	(13,223)	(186,433)	(12,694)
Depreciation	9,962	208,555	9,975	210,731	9,988	212,907	10,002	215,084	10,015
Capitalized Interest	-	(125)	-	(125)	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	21,630	228,438	21,770	239,069	21,886	248,126	21,978	255,748	22,047
Income Tax Provision*	7,210	75,097	7,257	78,640	7,295	81,659	7,326	84,200	7,349
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	88,221	1,166,187	88,480	1,178,733	88,771	1,191,323	89,094	1,204,033	89,452
Power and Other Variable Costs	-	129,604	-	134,788	-	140,180	-	145,787	-
Revenue Requirement - Excluding Power and Other Variable Cost	88,221	1,036,583	88,480	1,043,945	88,771	1,051,143	89,094	1,058,247	89,452

* Zero income tax in the first year due to n

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Rate Base Calculation									
Rate Base									
Open Plant in Service	626,900	7,497,488	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768
Open Accumulated Depreciation	(82,494)	(2,456,614)	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)
Total Open Net Plant	544,406	5,040,874	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347
Depreciation Expense	(9,962)	(208,555)	(9,975)	(210,731)	(9,988)	(212,907)	(10,002)	(215,084)	(10,015)
Capital Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Close Plant in Service	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768	7,781,964	629,235
Close Accumulated Depreciation	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)	(3,303,891)	(132,436)
Total Close Net Plant	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347	4,478,073	496,799
Average Plant in Service	539,658	4,972,156	530,157	4,833,632	520,642	4,692,931	511,114	4,550,055	501,573
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Net Rate Base	541,612	4,995,540	532,188	4,857,778	522,755	4,717,870	513,311	4,575,818	503,858
Working Capital Provision									
Operating Expenses	25,012	457,914	26,012	476,450	27,053	495,737	28,135	515,805	29,260
Less Insurance	(1,598)	-	(1,662)	-	(1,729)	-	(1,798)	-	(1,870)
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	23,413	457,914	24,350	476,450	25,324	495,737	26,337	515,805	27,390
Provision for cash requirement	962	18,818	1,001	19,580	1,041	20,373	1,082	21,197	1,126
Average Prepaid Expenses	991	-	1,031	-	1,072	-	1,115	-	1,159
Average Inventory	-	4,566	-	4,566	-	4,566	-	4,566	-
Average Working Capital Provision	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Book Basis									
Opening Balance	352,014	2,190,703	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882
Opening Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Additions - Expansion		-		-		-		-	
Closing Balance	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882	2,475,179	354,349
Closing Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Depreciation Expense	9,962	67,036	9,975	69,212	9,988	71,388	10,002	73,564	10,015
Depreciation Expense - Expansion		141,519		141,519		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735		107,735		107,735	
Net Book Value	339,708	6,741,610	340,175	6,812,729	340,642	6,883,848	341,109	6,954,967	341,576

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Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Tax Basis									
Opening Balance	373,632	662,725	358,687	672,869	344,339	682,171	330,566	690,701	317,343
Opening Balance - Expansion		1,793,402		1,623,029		1,468,841		1,329,301	
Additions	-	67,971	-	67,971	-	67,971	-	67,971	-
Additions - Expansion		-		-		-		-	
CCA	14,945	57,827	14,347	58,669	13,774	59,441	13,223	60,149	12,694
CCA - Expansion		170,373		154,188		139,540		126,284	
Closing Balance	358,687	672,869	344,339	682,171	330,566	690,701	317,343	698,523	304,649
Closing Balance - Expansion		1,623,029		1,468,841		1,329,301		1,203,018	
Tax loss Carry fwd									
Opening		-		-		-		-	
Used		3,148		3,148		3,148		3,148	
Increase		3,148		3,148		3,148		3,148	
Closing		-		-		-		-	

Cost of Service Revenue Requirement

Breakdown of Revenue Requirements 1

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
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TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Operating Expenses									
Power	151,618		157,683		163,990		170,550		177,372
Other Variable									
<u>Total Variable Component</u>	<u>151,618</u>		<u>157,683</u>		<u>163,990</u>		<u>170,550</u>		<u>177,372</u>
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>385,068</u>	<u>30,431</u>	<u>400,729</u>	<u>31,648</u>	<u>417,028</u>	<u>32,914</u>	<u>433,990</u>	<u>34,231</u>	<u>451,643</u>
Total Operating Expenses	<u>536,686</u>	<u>30,431</u>	<u>558,412</u>	<u>31,648</u>	<u>581,018</u>	<u>32,914</u>	<u>604,540</u>	<u>34,231</u>	<u>629,015</u>
Return on Capital									
Equity 10%	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Debt 7%	<u>155,107</u>	<u>17,304</u>	<u>149,985</u>	<u>16,972</u>	<u>144,788</u>	<u>16,640</u>	<u>139,517</u>	<u>16,308</u>	<u>134,171</u>
Total Return	<u>376,688</u>	<u>42,024</u>	<u>364,249</u>	<u>41,218</u>	<u>351,629</u>	<u>40,412</u>	<u>338,827</u>	<u>39,606</u>	<u>325,843</u>
Depreciation Expense	<u>217,260</u>	<u>10,028</u>	<u>219,436</u>	<u>10,041</u>	<u>221,612</u>	<u>10,055</u>	<u>223,789</u>	<u>10,068</u>	<u>225,965</u>
Total Capital Cost Recovery	<u>593,948</u>	<u>52,052</u>	<u>583,686</u>	<u>51,260</u>	<u>573,241</u>	<u>50,467</u>	<u>562,615</u>	<u>49,673</u>	<u>551,808</u>
Income Tax Provision									
Return on Equity	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Timing Differences:									
Capital Cost Allowance (CCA)	(175,085)	(12,186)	(164,823)	(11,699)	(155,543)	(11,231)	(147,151)	(10,781)	(139,563)
Depreciation	217,260	10,028	219,436	10,041	221,612	10,055	223,789	10,068	225,965
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>
Tax Base	262,062	22,095	267,184	22,122	271,216	22,129	274,253	22,117	276,380
Income Tax Provision*	86,305	7,365	88,012	7,374	89,356	7,376	90,368	7,372	91,077
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,216,938	89,847	1,230,110	90,282	1,243,616	90,757	1,257,524	91,276	1,271,900
Power and Other Variable Costs	151,618	-	157,683	-	163,990	-	170,550	-	177,372
Revenue Requirement - Excluding Power and Other Variable Cost	1,065,320	89,847	1,072,427	90,282	1,079,625	90,757	1,086,974	91,276	1,094,528

* Zero income tax in the first year due to n

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Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,781,964	629,235	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440
Open Accumulated Depreciation	(3,303,891)	(132,436)	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)
Total Open Net Plant	4,478,073	496,799	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452
Depreciation Expense	(217,260)	(10,028)	(219,436)	(10,041)	(221,612)	(10,055)	(223,789)	(10,068)	(225,965)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440	631,103	8,137,559
Close Accumulated Depreciation	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)	(172,628)	(4,411,953)
Total Close Net Plant	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452	458,475	3,725,606
Average Plant in Service	4,405,002	492,018	4,257,773	482,450	4,108,368	472,870	3,956,786	463,275	3,803,029
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Net Rate Base	4,431,624	494,395	4,285,288	484,922	4,136,811	475,440	3,986,197	465,949	3,833,445
Working Capital Provision									
Operating Expenses	536,686	30,431	558,412	31,648	581,018	32,914	604,540	34,231	629,015
Less Insurance	-	(1,945)	-	(2,023)	-	(2,104)	-	(2,188)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	536,686	28,486	558,412	29,626	581,018	30,811	604,540	32,043	629,015
Provision for cash requirement	22,056	1,171	22,948	1,217	23,877	1,266	24,844	1,317	25,850
Average Prepaid Expenses	-	1,206	-	1,254	-	1,304	-	1,356	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Book Basis									
Opening Balance	2,475,179	354,349	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655	356,217	2,830,774
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	75,740	10,028	77,917	10,041	80,093	10,055	82,269	10,068	84,445
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	7,026,086	342,043	7,097,205	342,510	7,168,324	342,977	7,239,443	343,444	7,310,562

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Tax Basis									
Opening Balance	698,523	304,649	705,696	292,464	712,273	280,765	718,305	269,534	723,836
Opening Balance - Expansion	1,203,018		1,088,731		985,302		891,698		806,987
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	60,798	12,186	61,394	11,699	61,939	11,231	62,440	10,781	62,899
CCA - Expansion	114,287		103,429		93,604		84,711		76,664
Closing Balance	705,696	292,464	712,273	280,765	718,305	269,534	723,836	258,753	728,907
Closing Balance - Expansion	1,088,731		985,302		891,698		806,987		730,323
Tax loss Carry fwd									
Opening	-		-		-		-		-
Used	3,148		3,148		3,148		3,148		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	-		-		-		-		-

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Operating Expenses					
Power		184,467		191,845	
Other Variable					
<u>Total Variable Component</u>		<u>184,467</u>		<u>191,845</u>	
Manpower					
Insurance					
Property Taxes					
Pipeline Costs					
NEB Cost Recovery					
Other Fixed					
<u>Total Fixed Component</u>	<u>35,600</u>	<u>470,014</u>	<u>37,024</u>	<u>489,132</u>	<u>38,505</u>
Total Operating Expenses	<u>35,600</u>	<u>654,480</u>	<u>37,024</u>	<u>680,978</u>	<u>38,505</u>
Return on Capital					
Equity 10%	22,822	183,928	22,347	176,077	21,871
Debt 7%	<u>15,976</u>	<u>128,750</u>	<u>15,643</u>	<u>123,254</u>	<u>15,310</u>
Total Return	38,798	312,677	37,990	299,331	37,181
Depreciation Expense	<u>10,081</u>	<u>228,141</u>	<u>10,094</u>	<u>230,317</u>	<u>10,107</u>
Total Capital Cost Recovery	<u>48,879</u>	<u>540,818</u>	<u>48,084</u>	<u>529,648</u>	<u>47,288</u>
Income Tax Provision					
Return on Equity	22,822	183,928	22,347	176,077	21,871
Timing Differences:					
Capital Cost Allowance (CCA)	(10,350)	(132,701)	(9,936)	(126,496)	(9,539)
Depreciation	10,081	228,141	10,094	230,317	10,107
Capitalized Interest	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	22,086	277,674	22,038	278,204	21,973
Income Tax Provision*	7,362	91,509	7,346	91,685	7,324
Income Taxes Payable for WC	-	-	-	-	-
Revenue Requirement	91,841	1,286,808	92,454	1,302,311	93,117
Power and Other Variable Costs	-	184,467	-	191,845	-
Revenue Requirement - Excluding Power and Other Variable Cost	91,841	1,102,341	92,454	1,110,466	93,117

0.90%

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Rate Base Calculation					
Rate Base					
Open Plant in Service	631,103	8,137,559	631,570	8,208,678	632,037
Open Accumulated Depreciation	(172,628)	(4,411,953)	(182,709)	(4,640,094)	(192,803)
Total Open Net Plant	458,475	3,725,606	448,861	3,568,584	439,234
Depreciation Expense	(10,081)	(228,141)	(10,094)	(230,317)	(10,107)
Capital Additions	467	71,119	467	71,119	467
Close Plant in Service	631,570	8,208,678	632,037	8,279,797	632,504
Close Accumulated Depreciation	(182,709)	(4,640,094)	(192,803)	(4,870,412)	(202,910)
Total Close Net Plant	448,861	3,568,584	439,234	3,409,385	429,594
Average Plant in Service	453,668	3,647,095	444,048	3,488,985	434,414
Average Deferred Income Taxes	-	-	-	-	-
Average Working Capital	2,780	31,462	2,891	32,551	3,007
Net Rate Base	456,448	3,678,557	446,939	3,521,536	437,421
Working Capital Provision					
Operating Expenses	35,600	654,480	37,024	680,978	38,505
Less Insurance	(2,275)	-	(2,366)	-	(2,461)
Plus Income Taxes Payable	-	-	-	-	-
Cash Cost of Service	33,325	654,480	34,658	680,978	36,044
Provision for cash requirement	1,370	26,896	1,424	27,985	1,481
Average Prepaid Expenses	1,411	-	1,467	-	1,526
Average Inventory	-	4,566	-	4,566	-
Average Working Capital Provision	2,780	31,462	2,891	32,551	3,007
Book Basis					
Opening Balance	356,217	2,830,774	356,684	2,901,893	357,151
Opening Balance - Expansion		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467
Additions - Expansion		-		-	
Closing Balance	356,684	2,901,893	357,151	2,973,012	357,618
Closing Balance - Expansion		5,320,278		5,320,278	
Depreciation Expense	10,081	86,622	10,094	88,798	10,107
Depreciation Expense - Expansion		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735	
Net Book Value	343,911	7,381,681	344,378	7,452,800	344,845

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Tax Basis					
Opening Balance	258,753	728,907	248,403	733,558	238,467
Opening Balance - Expansion		730,323		660,942	
Additions	-	67,971	-	67,971	-
Additions - Expansion		-		-	
CCA	10,350	63,320	9,936	63,706	9,539
CCA - Expansion		69,381		62,790	
Closing Balance	248,403	733,558	238,467	737,823	228,928
Closing Balance - Expansion		660,942		598,153	
Tax loss Carry fwd					
Opening		-		-	
Used		3,148		3,148	
Increase		3,148		3,148	
Closing		-		-	

Cost of Service Revenue Requirement

Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
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Breakdown of Revenue Requirements 1

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume less than 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	3.16	0.22	3.38	2.37	0.22	2.59
			20yr	2.84	0.22	3.06	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.43	0.31	4.74	3.32	0.31	3.63
			20yr	3.99	0.31	4.30	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.98	0.31	5.29	3.75	0.31	4.06
			20yr	4.48	0.31	4.79	3.75	0.31	4.06
		Heavy	15yr	4.98	0.37	5.35	3.75	0.37	4.12
			20yr	4.48	0.37	4.85	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	4.23	0.30	4.53	3.17	0.30	3.46
			20yr	3.80	0.30	4.10	3.17	0.30	3.46
		Heavy	15yr	4.23	0.36	4.59	3.17	0.36	3.52
			20yr	3.80	0.36	4.16	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.25	0.09	1.34	0.94	0.09	1.02
			20yr	1.13	0.09	1.22	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	1.05	0.07	1.12	0.78	0.07	0.86
			20yr	0.94	0.07	1.01	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume greater than or equal to 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	2.92	0.22	3.14	2.37	0.22	2.59
			20yr	2.63	0.22	2.85	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.10	0.31	4.41	3.32	0.31	3.63
			20yr	3.69	0.31	4.00	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.61	0.31	4.92	3.75	0.31	4.06
			20yr	4.14	0.31	4.45	3.75	0.31	4.06
		Heavy	15yr	4.61	0.37	4.98	3.75	0.37	4.12
			20yr	4.14	0.37	4.51	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	3.91	0.30	4.21	3.17	0.30	3.46
			20yr	3.52	0.30	3.82	3.17	0.30	3.46
		Heavy	15yr	3.91	0.36	4.27	3.17	0.36	3.52
			20yr	3.52	0.36	3.88	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.16	0.09	1.25	0.94	0.09	1.02
			20yr	1.04	0.09	1.13	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	0.97	0.07	1.04	0.78	0.07	0.86
			20yr	0.87	0.07	0.94	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System	Westridge Marine Terminal
Operating Expenses		
Power	91,058	-
Other Variable	-	-
<u>Total Variable Component</u>	<u>91,058</u>	<u>-</u>
Manpower	75,822	4,475
Insurance	15,058	1,168
Property Taxes	55,959	4,207
Pipeline Costs	46,642	9,332
NEB Cost Recovery	8,297	-
Other Fixed	27,566	-
<u>Total Fixed Component</u>	<u>229,344</u>	<u>19,182</u>
Total Operating Expenses	<u>320,402</u>	<u>19,182</u>
Return on Capital		
Equity	307,369.57	30,640
Debt	215,159	21,448
<u>Total Return</u>	<u>522,528</u>	<u>52,088</u>
Depreciation Expense	188,969	17,618
<u>Total Capital Cost Recovery</u>	<u>711,497</u>	<u>69,706</u>
Income Tax Provision		
Return on Equity	307,370	30,640
<u>Timing Differences:</u>		
Capital Cost Allowance (CCA)	(464,219)	(20,717)
Depreciation	188,969	17,618
Capitalized Interest	(174)	-
Other timing differences	(1,403)	(510)
<u>Tax Base</u>	<u>30,542</u>	<u>27,030</u>
Income Tax Provision*	-	-
Income Taxes Payable for WC	-	-
Revenue Requirement	1,031,899	88,888
Power and Other Variable Costs	91,058	-
Revenue Requirement - Excluding Power and Other Variable Cost	940,841	88,888

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000
Rate Base Calculation

	Expanded System	Westridge Marine Terminal
Rate Base		
Open Plant in Service	6,857,417	623,164
Open Accumulated Depreciation	(677,551)	(3,274)
Total Open Net Plant	6,179,866	619,890
Depreciation Expense	(188,969)	(17,618)
Capital Additions	71,119	510
Close Plant in Service	6,928,536	623,674
Close Accumulated Depreciation	(866,520)	(20,892)
Total Close Net Plant	6,062,016	602,782
Average Plant in Service	6,120,941	611,336
Average Deferred Income Taxes	-	-
Average Working Capital	26,450	1,464
Net Rate Base	6,147,391	612,801
Working Capital Provision		
Operating Expenses	320,402	19,182
Less Insurance	(15,058)	(1,168)
Plus Income Taxes Payable	-	-
Cash Cost of Service	305,344	18,014
Provision for cash requirement	12,548	740
Average Prepaid Expenses	9,336	724
Average Inventory	4,566	-
Average Working Capital Provision	26,450	1,464
Book Basis		
Opening Balance	1,550,632	622,529
Opening Balance - Expansion	5,320,278	
Additions	71,119	510
Additions - Expansion	-	
Closing Balance	1,621,751	623,039
Closing Balance - Expansion	5,320,278	
Depreciation Expense	47,449	17,618
Depreciation Expense - Expansion	141,519	
Accumulated Depreciation	732,755	20,535
Accumulated Depreciation - Expansion	141,519	
Net Book Value	6,067,755	602,504
Tax Basis		
Opening Balance	518,376	517,934
Opening Balance - Expansion	4,403,931	
Additions	67,971	-
Additions - Expansion	-	
CCA	45,846	20,717
CCA - Expansion	418,373	
Closing Balance	540,501	497,217
Closing Balance - Expansion	3,985,558	

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Breakdown of Revenue Requirements for Comparison with Indicative Tolls

	Fixed Component		Power and Other Variable Cost		
	Expanded System Excl. Westridge	Westridge Marine Terminal	Total	Light Volume	Heavy Volume
Expanded System	940,841		91,058		
Westridge Marine Terminal	(88,888)	88,888	-		
Total	851,953	88,888	91,058		
COST OF SERVICE FIRST-YEAR TOLL					
bbl/day			707,500	211,500	496,000
bbl kms per year (000,000)	294,784	247,414	294,784	88,123	206,661
Heavy / Light premium					20%
Light-Equivalent bbl kms per year (000,000)			336,116	88,123	247,993
Cost per bbl km (000,000)	2.89	0.36	0.27	0.27	0.33
Toll (\$/bbl)					
Edmonton to Kamloops	2.37			0.22	0.27
Edmonton to Sumas	3.17			0.30	0.36
Edmonton to Burnaby	3.32			0.31	0.37
Edmonton to Westridge	3.33	0.41		0.31	0.37
Kamloops to Sumas	0.78			0.07	0.09
Kamloops to Burnaby	0.94			0.09	0.11

Scenario A Case 10.xlsx

TRANS MOUNTAIN EXPANSION WORKSHEET: STANDARD ASSUMPTIONS

CALENDAR:

1 Year	2018
2 Days in Year	365

ASSUMPTIONS:

3 Equity Structure	50.0%
4 Debt Structure	50.0%
5 Equity Rate	10.0%
6 Debt Rate	7.0%
7 Weighted Equity	5.00%
8 Weighted Debt	3.5%
9 Income Tax Rate	25.0%
10 Accounting depreciation rate (base system)	3.06%
11 Accounting depreciation rate (expansion system)	2.66%
12 Accounting depreciation rate (dock system)	2.83%
13 Tax depreciation rate (base system)	8.30%
14 Tax depreciation rate (expansion system)	9.50%
15 Tax depreciation rate (dock system)	4.00%

Working Capital:

16 Days for Working Capital	15
17 Prepaid factor applied to insurance	62.0%

Volume/Distance

	Pipeline kms	Light YR1	Heavy YR1	Total Volume (bpd)	bbl kms / yr (000,000)
18 Edmonton to Kamloops	819.0	9,000	-	9,000	2,690
19 Edmonton to Sumas	1,095.5	45,000	40,000	85,000	33,988
20 Edmonton to Burnaby	1,148.7	25,500	-	25,500	10,692
21 Edmonton to Westridge	1,152.8	132,000	456,000	588,000	247,414
22 Kamloops to Sumas	271.0	-	-	-	-
23 Kamloops to Burnaby	324.2	-	-	-	-
24 Total		211,500	496,000	707,500	294,784

Inputs:

Scenario A:

- Same basic parameters or capital structure, ROE, interest and depreciation as in CAPP 1.3

- 2.5% annual escalation to the entire fixed toll for 20 years

Case #10:

- Full committed volumes (707,500 bpd) and zero uncommitted volumes plus 150,000 bpd of uncommitted volumes.

Capital Structure (%)

1 Equity	50%
2 Debt	50%
3 Cost of Debt	7.0%
4 Toll Annual Inflator	2.5%

Operating Cost Annual Inflators

5 Manpower	4%
6 Insurance	4%
7 Property Taxes	4%
8 Pipeline Costs	4%
9 NEB Cost Recovery	4%
10 Other Fixed	4%

Committed Volume

From:	To:	kbpd
11 Edmonton	Kamloops	9
12 Edmonton	Sumas	85
13 Edmonton	Burnaby	26
14 Edmonton	Westridge	588
15 Kamloops	Sumas	0
16 Kamloops	Burnaby	0
17	Total	708

Uncommitted Volume

From:	To:	kbpd
18 Edmonton	Kamloops	0
19 Edmonton	Sumas	113.5
20 Edmonton	Burnaby	0
21 Edmonton	Westridge	36.5
22 Kamloops	Sumas	0
23 Kamloops	Burnaby	0
24	Total	150

Outputs:

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Annual ROE	14.3%	13.9%	14.6%	15.4%	16.2%	17.1%	18.1%	18.4%	18.1%	19.1%	20.2%	21.3%	22.6%	24.0%	25.5%	27.2%	29.0%	31.1%	33.3%	35.8%

**Projected
Average ROE
20.9%**

	Fixed Toll (\$/bbl)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2	Edmonton to Westridge Dock Toll	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99

Average Fixed Toll (\$/bbl)	4.74
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Committed Volume:

Scenario A Case 10.xlsx

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Edmonton	Kamloops	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2 Edmonton	Sumas	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
3 Edmonton	Burnaby	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
4 Edmonton	Westridge	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0
5 Kamloops	Sumas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Kamloops	Burnaby	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Total	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5

Fixed Tolls:

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
8 Edmonton	Kamloops	2.37	2.43	2.49	2.55	2.61	2.68	2.74	2.81	2.88	2.96	3.03	3.11	3.18	3.26	3.34	3.43	3.51	3.60	3.69	3.78
9 Edmonton	Sumas	3.17	3.25	3.33	3.41	3.49	3.58	3.67	3.76	3.86	3.95	4.05	4.15	4.26	4.36	4.47	4.59	4.70	4.82	4.94	5.06
10 Edmonton	Burnaby	3.32	3.40	3.49	3.58	3.66	3.76	3.85	3.95	4.04	4.15	4.25	4.36	4.46	4.58	4.69	4.81	4.93	5.05	5.18	5.31
11 Edmonton	Westridge	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99
12 Kamloops	Sumas	0.78	0.80	0.82	0.84	0.86	0.89	0.91	0.93	0.95	0.98	1.00	1.03	1.05	1.08	1.11	1.13	1.16	1.19	1.22	1.25
13 Kamloops	Burnaby	0.94	0.96	0.98	1.01	1.03	1.06	1.09	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.36	1.39	1.43	1.46	1.50

Revenue (\$M):

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
14 Edmonton	Kamloops	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	12	12	12	12
15 Edmonton	Sumas	98	101	103	106	108	111	114	117	120	123	126	129	132	135	139	142	146	149	153	157
16 Edmonton	Burnaby	31	32	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
17 Edmonton	Westridge	804	824	845	866	887	910	932	956	980	1,004	1,029	1,055	1,081	1,108	1,136	1,164	1,193	1,223	1,254	1,285
18 Kamloops	Sumas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Kamloops	Burnaby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Total Revenue	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504

Spot Shipments (kbpd):		Scenario Case 2025																					
From:		To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	
1	Edmonton	Kamloops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	Edmonton	Sumas	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	
3	Edmonton	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	Edmonton	Westridge	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	
5	Kamloops	Sumas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	Kamloops	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	Total Volume (kbpd)		150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
8	Available Capacity (kbpd)		890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	
9	Committed Capacity (kbpd)		708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	
10	Total Spot Capacity		183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	
11	85% of Available Capacity		757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	
12	TMPL Spot Capacity		49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	
13	Revenue Sharing Capacity		134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	
14	Spot Revenue Sharing %		50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
15	TMPL Volume Share (kbpd)		99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
16	Spot Revenue Sharing Volume (kbpd)		50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5	
17	TMPL Spot Revenue (\$M)		132	135	139	142	146	149	153	157	161	165	169	173	178	182	187	191	196	201	206	211	
18	Shipper Spot Revenue (\$M)		67	69	70	72	74	76	78	80	82	84	86	88	90	92	95	97	100	102	105	107	
Spot Tolls (10% premium to 15 year toll)																							
From:			To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
19	Edmonton	Kamloops		2.60	2.67	2.74	2.80	2.87	2.95	3.02	3.09	3.17	3.25	3.33	3.42	3.50	3.59	3.68	3.77	3.87	3.96	4.06	4.16
20	Edmonton	Sumas		3.48	3.57	3.66	3.75	3.84	3.94	4.04	4.14	4.24	4.35	4.46	4.57	4.68	4.80	4.92	5.04	5.17	5.30	5.43	5.57
21	Edmonton	Burnaby		3.65	3.74	3.84	3.93	4.03	4.13	4.24	4.34	4.45	4.56	4.67	4.79	4.91	5.03	5.16	5.29	5.42	5.56	5.70	5.84
22	Edmonton	Westridge		4.12	4.22	4.33	4.44	4.55	4.66	4.78	4.90	5.02	5.15	5.27	5.41	5.54	5.68	5.82	5.97	6.12	6.27	6.43	6.59
23	Kamloops	Sumas		0.86	0.88	0.91	0.93	0.95	0.97	1.00	1.02	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38
24	Kamloops	Burnaby		1.03	1.06	1.08	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.35	1.39	1.42	1.46	1.49	1.53	1.57	1.61	1.65
25	Weighted Average Toll (\$/bbf)			3.64	3.73	3.82	3.92	4.02	4.12	4.22	4.32	4.43	4.54	4.66	4.77	4.89	5.01	5.14	5.27	5.40	5.54	5.67	5.82

Income Statement (\$M)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Net Rate Base	6,147	6,029	5,910	5,789	5,667	5,542	5,396	5,265	5,131	4,996	4,858	4,718	4,576	4,432	4,285	4,137	3,986	3,833	3,679	3,522
2 % Equity	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
3 % Debt	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
4 Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
5 Revenue: Contract	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504
6 Revenue: Spot	132	135	139	142	146	149	153	157	161	165	169	173	178	182	187	191	196	201	206	211
7 Fixed Operating Costs	229	239	248	258	269	280	291	303	315	328	342	356	370	385	401	417	434	452	470	489
8 EBITDA	844	861	879	897	915	934	953	972	992	1,012	1,032	1,052	1,073	1,094	1,115	1,137	1,159	1,181	1,203	1,226
9 Depreciation	189	191	193	195	198	200	202	204	206	209	211	213	215	217	219	222	224	226	228	230
10 Interest	215	211	207	203	198	194	189	184	180	175	170	165	160	155	150	145	140	134	129	123
11 Total	404	402	400	398	396	394	391	388	386	383	381	378	375	372	369	366	363	360	357	354
12 EBT	439	459	479	499	519	540	562	584	606	628	651	674	698	722	746	771	796	821	847	873
13 Taxes	-	39	46	52	59	66	73	98	141	151	161	171	180	190	199	208	217	226	234	243
14 Earnings	439	420	433	447	460	474	489	486	465	477	490	503	517	532	547	563	579	595	612	630
15 ROE	14.3%	13.9%	14.6%	15.4%	16.2%	17.1%	18.1%	18.4%	18.1%	19.1%	20.2%	21.3%	22.6%	24.0%	25.5%	27.2%	29.0%	31.1%	33.3%	35.8%

Average ROE
20.9%

Fixed Operating Costs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1 Manpower	75.8	79.0	82.3	85.8	89.4	93.1	97.1	101.1	105.4	109.8	114.4	119.2	124.2	129.4	134.9	140.5	146.4	152.6	159.0	165.7
2 Insurance	15.1	15.7	16.3	16.9	17.6	18.3	19.1	19.8	20.6	21.4	22.3	23.2	24.1	25.1	26.1	27.1	28.2	29.3	30.5	31.7
3 Property Taxes	56.0	58.2	60.5	62.9	65.5	68.1	70.8	73.6	76.6	79.6	82.8	86.1	89.6	93.2	96.9	100.8	104.8	109.0	113.4	117.9
4 Pipeline Costs	46.6	48.5	50.4	52.5	54.6	56.7	59.0	61.4	63.8	66.4	69.0	71.8	74.7	77.7	80.8	84.0	87.4	90.9	94.5	98.3
5 NEB Cost Recovery	8.3	8.6	9.0	9.3	9.7	10.1	10.5	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.4	14.9	15.5	16.2	16.8	17.5
6 Other Fixed	27.6	28.7	29.8	31.0	32.2	33.5	34.9	36.3	37.7	39.2	40.8	42.4	44.1	45.9	47.7	49.6	51.6	53.7	55.8	58.1
7 Total	229.3	238.7	248.4	258.5	269.0	279.9	291.3	303.2	315.5	328.3	341.7	355.6	370.0	385.1	400.7	417.0	434.0	451.6	470.0	489.1

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RATE BASE & INCOME TAX
CURRENCY: CA\$000

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Operating Expenses								
1 Power	91,058	-	94,700		98,488		102,428	
2 Other Variable	-	-						
3 <u>Total Variable Component</u>	91,058	-	94,700		98,488		102,428	
4 Manpower	72,917	4,475						
5 Insurance	15,058	1,168						
6 Property Taxes	53,849	3,951						
7 Pipeline Costs	43,371	8,682						
8 NEB Cost Recovery	6,927	-						
9 Other Fixed	18,779	-						
10 <u>Total Fixed Component</u>	210,901	18,276	238,669	19,007	248,374	19,767	258,474	20,558
11 <u>Total Operating Expenses</u>	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
Return on Capital								
12 Equity 10%	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
13 Debt 7%	215,159	21,583	211,027	21,255	206,861	20,928	202,629	20,600
14 <u>Total Return</u>	522,528	52,416	512,493	51,619	502,377	50,824	492,099	50,029
15 Depreciation Expense	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
16 <u>Total Capital Cost Recovery</u>	711,497	62,272	703,638	61,489	695,698	60,707	687,597	59,925
Income Tax Provision								
17 Return on Equity	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
Timing Differences:								
18 Capital Cost Allowance (CCA)	(464,219)	(20,717)	(426,310)	(19,889)	(392,024)	(19,093)	(361,016)	(18,329)
19 Depreciation	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
20 Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-
21 Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)
22 <u>Tax Base</u>	30,425	19,505	64,608	19,878	95,119	20,219	122,258	20,528
23 <u>Income Tax Provision*</u>	-	-	-	-	-	-	-	-
24 <u>Income Taxes Payable for WC</u>	-	-	-	-	-	-	-	-
25 Revenue Requirement	1,031,899	81,454	1,037,008	80,496	1,042,561	80,474	1,048,498	80,483
26 Power and Other Variable Costs	91,058	-	94,700	-	98,488	-	102,428	-
Revenue Requirement - Excluding								
27 <u>Power and Other Variable Cost</u>	940,841	81,454	942,308	80,496	944,072	80,474	946,071	80,483

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Cost of Service Revenue Requirement			0.04					
	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Rate Base Calculation								
	Expanded System	Westridge Marine Terminal						
Rate Base								
28 Open Plant in Service	6,857,417	623,164	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565
29 Open Accumulated Depreciation	(677,551)	(3,274)	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)
30 Total Open Net Plant	6,179,866	619,890	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683
31 Depreciation Expense	(188,969)	(9,856)	(191,145)	(9,869)	(193,321)	(9,883)	(195,497)	(9,896)
32 Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467
33 Close Plant in Service	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565	7,141,893	625,032
34 Close Accumulated Depreciation	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)	(1,446,483)	(42,778)
35 Total Close Net Plant	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683	5,695,410	582,254
36 Average Plant in Service	6,120,941	615,195	6,002,003	605,799	5,880,889	596,390	5,757,599	586,968
37 Average Deferred Income Taxes	-	-	-	-	-	-	-	-
38 Average Working Capital	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
39 Net Rate Base	6,147,391	616,660	6,029,335	607,284	5,910,316	597,934	5,789,404	588,574
Working Capital Provision								
40 Operating Expenses	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
41 Less Insurance	(15,058)	(1,168)	(15,660)	(1,215)	(18,320)	(1,263)	(21,432)	(1,314)
42 Plus Income Taxes Payable	-	-	-	-	-	-	-	-
43 Cash Cost of Service	305,344	18,014	317,709	17,792	328,542	18,504	339,469	19,244
44 Provision for cash requirement	12,548	740	13,057	731	13,502	760	13,951	791
45 Average Prepaid Expenses	9,336	724	9,709	753	11,359	783	13,288	815
46 Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-
47 Average Working Capital Provision	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
Book Basis								
48 Opening Balance	1,550,632	348,278	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679
49 Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
50 Additions	71,119	467	71,119	467	71,119	467	71,119	467
51 Additions - Expansion	-		-		-		-	
52 Closing Balance	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679	1,835,108	350,146
53 Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
54 Depreciation Expense	47,449	9,856	49,626	9,869	51,802	9,883	53,978	9,896
55 Depreciation Expense - Expansion	141,519		141,519		141,519		141,519	
56 Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
57 Accumulated Depreciation - Expansion	107,735		249,254		107,735		107,735	
58 Net Book Value	6,101,539	335,972	6,031,139	336,439	6,243,777	336,906	6,314,896	337,373

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Tax Basis								
59 Opening Balance	518,373	517,934	540,498	497,217	560,787	477,328	579,392	458,235
60 Opening Balance - Expansion	4,403,931		3,985,558		3,606,930		3,264,271	
61 Additions	67,971	-	67,971	-	67,971	-	67,971	-
62 Additions - Expansion	-		-		-		-	
63 CCA	45,846	20,717	47,682	19,889	49,366	19,093	50,910	18,329
64 CCA - Expansion	418,373		378,628		342,658		310,106	
65 Closing Balance	540,498	497,217	560,787	477,328	579,392	458,235	596,453	439,905
66 Closing Balance - Expansion	3,985,558		3,606,930		3,264,271		2,954,166	
Tax loss Carry fwd								
67 Opening	916,347		889,070		827,610		735,640	
68 Used	30,425		64,608		95,119		122,258	
69 Increase	3,148		3,148		3,148		3,148	
70 Closing	889,070		827,610		735,640		616,530	

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Breakdown of Revenue Requirements for Comparison with Indicative Tolls								
	Fixed Component		Power and Other Variable Cost		Power and Other Variable Cost			
	Expanded System Excl. Westridge	Westridge Marine Terminal		Heavy Volume				
			Total		Total			
Expanded System	940,841		942,308		94,700			
Westridge Marine Terminal	(88,888)	88,888	(80,496)	80,496	-			
Total	851,953	88,888	861,812		94,700			
COST OF SERVICE FIRST-YEAR TOLL								
bbl/day			707,500	496,000	-		-	
bbl kms per year (000,000)	294,784	247,414	294,784	206,661	294,784	#	#DIV/0!	
Heavy / Light premium				20%			20%	
Light-Equivalent bbl kms per year (000,000)			336,116	247,993	#DIV/0!	#	#DIV/0!	
Cost per bbl km (000,000)	2.89	0.35927	2.56	3.08	#DIV/0!	#	#DIV/0!	
Toll (\$/bbl)								
Edmonton to Kamloops	2.36699		2.42616	-	-	#	#DIV/0!	
Edmonton to Sumas	3.16610		3.24525	-	-	#	#DIV/0!	
Edmonton to Burnaby	3.31985		3.40285	-	-	#	#DIV/0!	
Edmonton to Westridge	3.33170	0.41	3.41500	0.41	-	#	#DIV/0!	
Kamloops to Sumas	0.78322		0.80280	-	-	#	#DIV/0!	
Kamloops to Burnaby	0.93697		0.96039	-	-	#	#DIV/0!	

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Operating Expenses									
Power	106,525		110,786		115,217		119,826		124,619
Other Variable									
Total Variable Component	106,525		110,786		115,217		119,826		124,619
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
Total Fixed Component	268,984	21,380	279,922	22,236	291,306	23,125	303,152	24,050	315,480
Total Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Return on Capital									
Equity 10%	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Debt 7%	198,333	20,272	193,973	19,944	188,858	19,615	184,262	19,286	179,590
Total Return	481,665	49,232	471,078	48,435	458,655	47,636	447,493	46,837	436,148
Depreciation Expense	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Total Capital Cost Recovery	679,339	59,141	670,928	58,357	660,681	57,572	651,695	56,786	642,527
Income Tax Provision									
Return on Equity	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Timing Differences:									
Capital Cost Allowance (CCA)	(332,972)	(17,596)	(307,609)	(16,892)	(284,671)	(16,217)	(263,927)	(15,568)	(245,166)
Depreciation	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)
Tax Base	146,340	20,806	167,651	21,054	185,458	21,273	201,813	21,465	216,076
Income Tax Provision*	-	-	-	-	-	-	24,046	7,155	70,976
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,054,848	80,522	1,061,636	80,593	1,067,204	80,697	1,098,720	87,991	1,153,602
Power and Other Variable Costs	106,525	-	110,786	-	115,217	-	119,826	-	124,619
Revenue Requirement - Excluding Power and Other Variable Cost	948,323	80,522	950,850	80,593	951,987	80,697	978,894	87,991	1,028,983

* Zero income tax in the first year due to n

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,141,893	625,032	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369
Open Accumulated Depreciation	(1,446,483)	(42,778)	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)
Total Open Net Plant	5,695,410	582,254	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133
Depreciation Expense	(197,674)	(9,909)	(199,850)	(9,922)	(202,026)	(9,936)	(204,202)	(9,949)	(206,379)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369	626,900	7,497,488
Close Accumulated Depreciation	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)	(82,494)	(2,456,614)
Total Close Net Plant	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133	544,406	5,040,874
Average Plant in Service	5,632,132	577,533	5,504,489	568,084	5,374,670	558,622	5,242,675	549,147	5,108,504
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Net Rate Base	5,666,645	579,202	5,542,092	569,820	5,395,943	560,428	5,264,624	551,025	5,131,156
Working Capital Provision									
Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Less Insurance	(25,073)	(1,366)	(29,331)	(1,421)	-	(1,478)	-	(1,537)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	350,437	20,014	361,377	20,814	406,523	21,647	422,978	22,513	440,099
Provision for cash requirement	14,402	822	14,851	855	16,706	890	17,383	925	18,086
Average Prepaid Expenses	15,545	847	18,186	881	-	916	-	953	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Book Basis									
Opening Balance	1,835,108	350,146	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584	352,014	2,190,703
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	56,154	9,909	58,331	9,922	60,507	9,936	62,683	9,949	64,859
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	6,386,015	337,840	6,457,134	338,307	6,528,253	338,774	6,599,372	339,241	6,670,491

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Tax Basis									
Opening Balance	596,453	439,905	612,097	422,309	626,443	405,417	639,599	389,200	651,662
Opening Balance - Expansion	2,954,166		2,673,520		2,419,535		2,189,680		1,981,660
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	52,326	17,596	53,625	16,892	54,816	16,217	55,907	15,568	56,909
CCA - Expansion	280,646		253,984		229,856		208,020		188,258
Closing Balance	612,097	422,309	626,443	405,417	639,599	389,200	651,662	373,632	662,725
Closing Balance - Expansion	2,673,520		2,419,535		2,189,680		1,981,660		1,793,402
Tax loss Carry fwd									
Opening	616,530		473,338		308,835		126,525		-
Used	146,340		167,651		185,458		129,673		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	473,338		308,835		126,525		-		-

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Operating Expenses									
Power		129,604		134,788		140,180		145,787	
Other Variable									
<u>Total Variable Component</u>		<u>129,604</u>		<u>134,788</u>		<u>140,180</u>		<u>145,787</u>	
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>25,012</u>	<u>328,310</u>	<u>26,012</u>	<u>341,662</u>	<u>27,053</u>	<u>355,558</u>	<u>28,135</u>	<u>370,018</u>	<u>29,260</u>
Total Operating Expenses	<u>25,012</u>	<u>457,914</u>	<u>26,012</u>	<u>476,450</u>	<u>27,053</u>	<u>495,737</u>	<u>28,135</u>	<u>515,805</u>	<u>29,260</u>
Return on Capital									
Equity 10%	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Debt 7%	<u>18,956</u>	<u>174,844</u>	<u>18,627</u>	<u>170,022</u>	<u>18,296</u>	<u>165,125</u>	<u>17,966</u>	<u>160,154</u>	<u>17,635</u>
Total Return	<u>46,037</u>	<u>424,621</u>	<u>45,236</u>	<u>412,911</u>	<u>44,434</u>	<u>401,019</u>	<u>43,631</u>	<u>388,945</u>	<u>42,828</u>
Depreciation Expense	<u>9,962</u>	<u>208,555</u>	<u>9,975</u>	<u>210,731</u>	<u>9,988</u>	<u>212,907</u>	<u>10,002</u>	<u>215,084</u>	<u>10,015</u>
Total Capital Cost Recovery	<u>55,999</u>	<u>633,176</u>	<u>55,211</u>	<u>623,642</u>	<u>54,423</u>	<u>613,926</u>	<u>53,633</u>	<u>604,028</u>	<u>52,843</u>
Income Tax Provision									
Return on Equity	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Timing Differences:									
Capital Cost Allowance (CCA)	(14,945)	(228,200)	(14,347)	(212,857)	(13,774)	(198,981)	(13,223)	(186,433)	(12,694)
Depreciation	9,962	208,555	9,975	210,731	9,988	212,907	10,002	215,084	10,015
Capitalized Interest	-	(125)	-	(125)	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	21,630	228,438	21,770	239,069	21,886	248,126	21,978	255,748	22,047
Income Tax Provision*	7,210	75,097	7,257	78,640	7,295	81,659	7,326	84,200	7,349
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	88,221	1,166,187	88,480	1,178,733	88,771	1,191,323	89,094	1,204,033	89,452
Power and Other Variable Costs	-	129,604	-	134,788	-	140,180	-	145,787	-
Revenue Requirement - Excluding Power and Other Variable Cost	88,221	1,036,583	88,480	1,043,945	88,771	1,051,143	89,094	1,058,247	89,452

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Rate Base Calculation									
Rate Base									
Open Plant in Service	626,900	7,497,488	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768
Open Accumulated Depreciation	(82,494)	(2,456,614)	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)
Total Open Net Plant	544,406	5,040,874	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347
Depreciation Expense	(9,962)	(208,555)	(9,975)	(210,731)	(9,988)	(212,907)	(10,002)	(215,084)	(10,015)
Capital Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Close Plant in Service	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768	7,781,964	629,235
Close Accumulated Depreciation	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)	(3,303,891)	(132,436)
Total Close Net Plant	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347	4,478,073	496,799
Average Plant in Service	539,658	4,972,156	530,157	4,833,632	520,642	4,692,931	511,114	4,550,055	501,573
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Net Rate Base	541,612	4,995,540	532,188	4,857,778	522,755	4,717,870	513,311	4,575,818	503,858
Working Capital Provision									
Operating Expenses	25,012	457,914	26,012	476,450	27,053	495,737	28,135	515,805	29,260
Less Insurance	(1,598)	-	(1,662)	-	(1,729)	-	(1,798)	-	(1,870)
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	23,413	457,914	24,350	476,450	25,324	495,737	26,337	515,805	27,390
Provision for cash requirement	962	18,818	1,001	19,580	1,041	20,373	1,082	21,197	1,126
Average Prepaid Expenses	991	-	1,031	-	1,072	-	1,115	-	1,159
Average Inventory	-	4,566	-	4,566	-	4,566	-	4,566	-
Average Working Capital Provision	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Book Basis									
Opening Balance	352,014	2,190,703	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882
Opening Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Additions - Expansion		-		-		-		-	
Closing Balance	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882	2,475,179	354,349
Closing Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Depreciation Expense	9,962	67,036	9,975	69,212	9,988	71,388	10,002	73,564	10,015
Depreciation Expense - Expansion		141,519		141,519		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735		107,735		107,735	
Net Book Value	339,708	6,741,610	340,175	6,812,729	340,642	6,883,848	341,109	6,954,967	341,576

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Tax Basis									
Opening Balance	373,632	662,725	358,687	672,869	344,339	682,171	330,566	690,701	317,343
Opening Balance - Expansion		1,793,402		1,623,029		1,468,841		1,329,301	
Additions	-	67,971	-	67,971	-	67,971	-	67,971	-
Additions - Expansion		-		-		-		-	
CCA	14,945	57,827	14,347	58,669	13,774	59,441	13,223	60,149	12,694
CCA - Expansion		170,373		154,188		139,540		126,284	
Closing Balance	358,687	672,869	344,339	682,171	330,566	690,701	317,343	698,523	304,649
Closing Balance - Expansion		1,623,029		1,468,841		1,329,301		1,203,018	
Tax loss Carry fwd									
Opening		-		-		-		-	
Used		3,148		3,148		3,148		3,148	
Increase		3,148		3,148		3,148		3,148	
Closing		-		-		-		-	

Expanded
System2027

Expanded
System2028

Expanded
System2029

Expanded
System2030

Breakdown of Revenue Requirements 1

Total

Cost per bbl km (000,000)

Kamloops to Burnaby

tax RB depr

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Operating Expenses									
Power	151,618		157,683		163,990		170,550		177,372
Other Variable									
<u>Total Variable Component</u>	<u>151,618</u>		<u>157,683</u>		<u>163,990</u>		<u>170,550</u>		<u>177,372</u>
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>385,068</u>	<u>30,431</u>	<u>400,729</u>	<u>31,648</u>	<u>417,028</u>	<u>32,914</u>	<u>433,990</u>	<u>34,231</u>	<u>451,643</u>
Total Operating Expenses	<u>536,686</u>	<u>30,431</u>	<u>558,412</u>	<u>31,648</u>	<u>581,018</u>	<u>32,914</u>	<u>604,540</u>	<u>34,231</u>	<u>629,015</u>
Return on Capital									
Equity 10%	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Debt 7%	<u>155,107</u>	<u>17,304</u>	<u>149,985</u>	<u>16,972</u>	<u>144,788</u>	<u>16,640</u>	<u>139,517</u>	<u>16,308</u>	<u>134,171</u>
Total Return	<u>376,688</u>	<u>42,024</u>	<u>364,249</u>	<u>41,218</u>	<u>351,629</u>	<u>40,412</u>	<u>338,827</u>	<u>39,606</u>	<u>325,843</u>
Depreciation Expense	<u>217,260</u>	<u>10,028</u>	<u>219,436</u>	<u>10,041</u>	<u>221,612</u>	<u>10,055</u>	<u>223,789</u>	<u>10,068</u>	<u>225,965</u>
Total Capital Cost Recovery	<u>593,948</u>	<u>52,052</u>	<u>583,686</u>	<u>51,260</u>	<u>573,241</u>	<u>50,467</u>	<u>562,615</u>	<u>49,673</u>	<u>551,808</u>
Income Tax Provision									
Return on Equity	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Timing Differences:									
Capital Cost Allowance (CCA)	(175,085)	(12,186)	(164,823)	(11,699)	(155,543)	(11,231)	(147,151)	(10,781)	(139,563)
Depreciation	217,260	10,028	219,436	10,041	221,612	10,055	223,789	10,068	225,965
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>
Tax Base	262,062	22,095	267,184	22,122	271,216	22,129	274,253	22,117	276,380
Income Tax Provision*	86,305	7,365	88,012	7,374	89,356	7,376	90,368	7,372	91,077
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,216,938	89,847	1,230,110	90,282	1,243,616	90,757	1,257,524	91,276	1,271,900
Power and Other Variable Costs	151,618	-	157,683	-	163,990	-	170,550	-	177,372
Revenue Requirement - Excluding Power and Other Variable Cost	<u>1,065,320</u>	<u>89,847</u>	<u>1,072,427</u>	<u>90,282</u>	<u>1,079,625</u>	<u>90,757</u>	<u>1,086,974</u>	<u>91,276</u>	<u>1,094,528</u>

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,781,964	629,235	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440
Open Accumulated Depreciation	(3,303,891)	(132,436)	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)
Total Open Net Plant	4,478,073	496,799	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452
Depreciation Expense	(217,260)	(10,028)	(219,436)	(10,041)	(221,612)	(10,055)	(223,789)	(10,068)	(225,965)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440	631,103	8,137,559
Close Accumulated Depreciation	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)	(172,628)	(4,411,953)
Total Close Net Plant	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452	458,475	3,725,606
Average Plant in Service	4,405,002	492,018	4,257,773	482,450	4,108,368	472,870	3,956,786	463,275	3,803,029
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Net Rate Base	4,431,624	494,395	4,285,288	484,922	4,136,811	475,440	3,986,197	465,949	3,833,445
Working Capital Provision									
Operating Expenses	536,686	30,431	558,412	31,648	581,018	32,914	604,540	34,231	629,015
Less Insurance	-	(1,945)	-	(2,023)	-	(2,104)	-	(2,188)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	536,686	28,486	558,412	29,626	581,018	30,811	604,540	32,043	629,015
Provision for cash requirement	22,056	1,171	22,948	1,217	23,877	1,266	24,844	1,317	25,850
Average Prepaid Expenses	-	1,206	-	1,254	-	1,304	-	1,356	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Book Basis									
Opening Balance	2,475,179	354,349	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655	356,217	2,830,774
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	75,740	10,028	77,917	10,041	80,093	10,055	82,269	10,068	84,445
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	7,026,086	342,043	7,097,205	342,510	7,168,324	342,977	7,239,443	343,444	7,310,562

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Tax Basis									
Opening Balance	698,523	304,649	705,696	292,464	712,273	280,765	718,305	269,534	723,836
Opening Balance - Expansion	1,203,018		1,088,731		985,302		891,698		806,987
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	60,798	12,186	61,394	11,699	61,939	11,231	62,440	10,781	62,899
CCA - Expansion	114,287		103,429		93,604		84,711		76,664
Closing Balance	705,696	292,464	712,273	280,765	718,305	269,534	723,836	258,753	728,907
Closing Balance - Expansion	1,088,731		985,302		891,698		806,987		730,323
Tax loss Carry fwd									
Opening	-		-		-		-		-
Used	3,148		3,148		3,148		3,148		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	-		-		-		-		-

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Operating Expenses					
Power		184,467		191,845	
Other Variable					
<u>Total Variable Component</u>		<u>184,467</u>		<u>191,845</u>	
Manpower					
Insurance					
Property Taxes					
Pipeline Costs					
NEB Cost Recovery					
Other Fixed					
<u>Total Fixed Component</u>	<u>35,600</u>	<u>470,014</u>	<u>37,024</u>	<u>489,132</u>	<u>38,505</u>
Total Operating Expenses	<u>35,600</u>	<u>654,480</u>	<u>37,024</u>	<u>680,978</u>	<u>38,505</u>
Return on Capital					
Equity 10%	22,822	183,928	22,347	176,077	21,871
Debt 7%	<u>15,976</u>	<u>128,750</u>	<u>15,643</u>	<u>123,254</u>	<u>15,310</u>
Total Return	38,798	312,677	37,990	299,331	37,181
Depreciation Expense	<u>10,081</u>	<u>228,141</u>	<u>10,094</u>	<u>230,317</u>	<u>10,107</u>
Total Capital Cost Recovery	<u>48,879</u>	<u>540,818</u>	<u>48,084</u>	<u>529,648</u>	<u>47,288</u>
Income Tax Provision					
Return on Equity	22,822	183,928	22,347	176,077	21,871
Timing Differences:					
Capital Cost Allowance (CCA)	(10,350)	(132,701)	(9,936)	(126,496)	(9,539)
Depreciation	10,081	228,141	10,094	230,317	10,107
Capitalized Interest	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	22,086	277,674	22,038	278,204	21,973
Income Tax Provision*	7,362	91,509	7,346	91,685	7,324
Income Taxes Payable for WC	-	-	-	-	-
Revenue Requirement	91,841	1,286,808	92,454	1,302,311	93,117
Power and Other Variable Costs	-	184,467	-	191,845	-
Revenue Requirement - Excluding Power and Other Variable Cost	91,841	1,102,341	92,454	1,110,466	93,117

0.90%

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Rate Base Calculation					
Rate Base					
Open Plant in Service	631,103	8,137,559	631,570	8,208,678	632,037
Open Accumulated Depreciation	(172,628)	(4,411,953)	(182,709)	(4,640,094)	(192,803)
Total Open Net Plant	458,475	3,725,606	448,861	3,568,584	439,234
Depreciation Expense	(10,081)	(228,141)	(10,094)	(230,317)	(10,107)
Capital Additions	467	71,119	467	71,119	467
Close Plant in Service	631,570	8,208,678	632,037	8,279,797	632,504
Close Accumulated Depreciation	(182,709)	(4,640,094)	(192,803)	(4,870,412)	(202,910)
Total Close Net Plant	448,861	3,568,584	439,234	3,409,385	429,594
Average Plant in Service	453,668	3,647,095	444,048	3,488,985	434,414
Average Deferred Income Taxes	-	-	-	-	-
Average Working Capital	2,780	31,462	2,891	32,551	3,007
Net Rate Base	456,448	3,678,557	446,939	3,521,536	437,421
Working Capital Provision					
Operating Expenses	35,600	654,480	37,024	680,978	38,505
Less Insurance	(2,275)	-	(2,366)	-	(2,461)
Plus Income Taxes Payable	-	-	-	-	-
Cash Cost of Service	33,325	654,480	34,658	680,978	36,044
Provision for cash requirement	1,370	26,896	1,424	27,985	1,481
Average Prepaid Expenses	1,411	-	1,467	-	1,526
Average Inventory	-	4,566	-	4,566	-
Average Working Capital Provision	2,780	31,462	2,891	32,551	3,007
Book Basis					
Opening Balance	356,217	2,830,774	356,684	2,901,893	357,151
Opening Balance - Expansion		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467
Additions - Expansion		-		-	
Closing Balance	356,684	2,901,893	357,151	2,973,012	357,618
Closing Balance - Expansion		5,320,278		5,320,278	
Depreciation Expense	10,081	86,622	10,094	88,798	10,107
Depreciation Expense - Expansion		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735	
Net Book Value	343,911	7,381,681	344,378	7,452,800	344,845

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Tax Basis					
Opening Balance	258,753	728,907	248,403	733,558	238,467
Opening Balance - Expansion		730,323		660,942	
Additions	-	67,971	-	67,971	-
Additions - Expansion		-		-	
CCA	10,350	63,320	9,936	63,706	9,539
CCA - Expansion		69,381		62,790	
Closing Balance	248,403	733,558	238,467	737,823	228,928
Closing Balance - Expansion		660,942		598,153	
Tax loss Carry fwd					
Opening		-		-	
Used		3,148		3,148	
Increase		3,148		3,148	
Closing		-		-	

Cost of Service Revenue Requirement

Breakdown of Revenue Requirements 1

Westridge
Marine
Terminal

Expanded
System2036

Westridge
Marine
Terminal

Expanded
System2037

Westridge
Marine
Terminal

Expanded System
Westridge Marine Terminal

Total

COST OF SERVICE FIRST-YEAR TOLL

bbl/day

bbl kms per year (000,000)

Heavy / Light premium

Light-Equivalent bbl kms per year (000,00

Cost per bbl km (000,000)

Toll (\$/bbl)

Edmonton to Kamloops

Edmonton to Sumas

Edmonton to Burnaby

Edmonton to Westridge

Kamloops to Sumas

Kamloops to Burnaby

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume less than 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	3.16	0.22	3.38	2.37	0.22	2.59
			20yr	2.84	0.22	3.06	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.43	0.31	4.74	3.32	0.31	3.63
			20yr	3.99	0.31	4.30	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.98	0.31	5.29	3.75	0.31	4.06
			20yr	4.48	0.31	4.79	3.75	0.31	4.06
		Heavy	15yr	4.98	0.37	5.35	3.75	0.37	4.12
			20yr	4.48	0.37	4.85	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	4.23	0.30	4.53	3.17	0.30	3.46
			20yr	3.80	0.30	4.10	3.17	0.30	3.46
		Heavy	15yr	4.23	0.36	4.59	3.17	0.36	3.52
			20yr	3.80	0.36	4.16	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.25	0.09	1.34	0.94	0.09	1.02
			20yr	1.13	0.09	1.22	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	1.05	0.07	1.12	0.78	0.07	0.86
			20yr	0.94	0.07	1.01	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION

WORKSHEET: SUMMARY

CURRENCY: CA\$/bbl

Total Contract Volume greater than or equal to 75,000 barrels per day:

Receipt Point	Delivery Point	Petroleum Type and Contract Term		Schedule B of FSA (Indicative Toll Estimates)			1st Year Cost of Service Toll (10% ROE as Requested)		
				Fixed	Variable	Total	Fixed	Variable	Total
Edmonton	Kamloops	Light	15yr	2.92	0.22	3.14	2.37	0.22	2.59
			20yr	2.63	0.22	2.85	2.37	0.22	2.59
Edmonton	Burnaby	Light	15yr	4.10	0.31	4.41	3.32	0.31	3.63
			20yr	3.69	0.31	4.00	3.32	0.31	3.63
Edmonton	Westridge	Light	15yr	4.61	0.31	4.92	3.75	0.31	4.06
			20yr	4.14	0.31	4.45	3.75	0.31	4.06
		Heavy	15yr	4.61	0.37	4.98	3.75	0.37	4.12
			20yr	4.14	0.37	4.51	3.75	0.37	4.12
Edmonton	Sumas	Light	15yr	3.91	0.30	4.21	3.17	0.30	3.46
			20yr	3.52	0.30	3.82	3.17	0.30	3.46
		Heavy	15yr	3.91	0.36	4.27	3.17	0.36	3.52
			20yr	3.52	0.36	3.88	3.17	0.36	3.52
Kamloops	Burnaby	Light	15yr	1.16	0.09	1.25	0.94	0.09	1.02
			20yr	1.04	0.09	1.13	0.94	0.09	1.02
Kamloops	Sumas	Light	15yr	0.97	0.07	1.04	0.78	0.07	0.86
			20yr	0.87	0.07	0.94	0.78	0.07	0.86

Note: Variable tolls under the contract are set equal to variable tolls under Cost of Service.

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System	Westridge Marine Terminal
Operating Expenses		
Power	91,058	-
Other Variable	-	-
<u>Total Variable Component</u>	91,058	-
Manpower	75,822	4,475
Insurance	15,058	1,168
Property Taxes	55,959	4,207
Pipeline Costs	46,642	9,332
NEB Cost Recovery	8,297	-
Other Fixed	27,566	-
<u>Total Fixed Component</u>	229,344	19,182
<u>Total Operating Expenses</u>	<u>320,402</u>	<u>19,182</u>
Return on Capital		
Equity	307,369.57	30,640
Debt	215,159	21,448
<u>Total Return</u>	<u>522,528</u>	<u>52,088</u>
Depreciation Expense	188,969	17,618
<u>Total Capital Cost Recovery</u>	<u>711,497</u>	<u>69,706</u>
Income Tax Provision		
Return on Equity	307,370	30,640
<u>Timing Differences:</u>		
Capital Cost Allowance (CCA)	(464,219)	(20,717)
Depreciation	188,969	17,618
Capitalized Interest	(174)	-
Other timing differences	(1,403)	(510)
<u>Tax Base</u>	<u>30,542</u>	<u>27,030</u>
<u>Income Tax Provision*</u>	<u>-</u>	<u>-</u>
Income Taxes Payable for WC	-	-
Revenue Requirement	1,031,899	88,888
Power and Other Variable Costs	91,058	-
Revenue Requirement - Excluding Power and Other Variable Cost	940,841	88,888

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000
Rate Base Calculation

	Expanded System	Westridge Marine Terminal
Rate Base		
Open Plant in Service	6,857,417	623,164
Open Accumulated Depreciation	(677,551)	(3,274)
Total Open Net Plant	6,179,866	619,890
Depreciation Expense	(188,969)	(17,618)
Capital Additions	71,119	510
Close Plant in Service	6,928,536	623,674
Close Accumulated Depreciation	(866,520)	(20,892)
Total Close Net Plant	6,062,016	602,782
Average Plant in Service	6,120,941	611,336
Average Deferred Income Taxes	-	-
Average Working Capital	26,450	1,464
Net Rate Base	6,147,391	612,801
Working Capital Provision		
Operating Expenses	320,402	19,182
Less Insurance	(15,058)	(1,168)
Plus Income Taxes Payable	-	-
Cash Cost of Service	305,344	18,014
Provision for cash requirement	12,548	740
Average Prepaid Expenses	9,336	724
Average Inventory	4,566	-
Average Working Capital Provision	26,450	1,464
Book Basis		
Opening Balance	1,550,632	622,529
Opening Balance - Expansion	5,320,278	
Additions	71,119	510
Additions - Expansion	-	
Closing Balance	1,621,751	623,039
Closing Balance - Expansion	5,320,278	
Depreciation Expense	47,449	17,618
Depreciation Expense - Expansion	141,519	
Accumulated Depreciation	732,755	20,535
Accumulated Depreciation - Expansion	141,519	
Net Book Value	6,067,755	602,504
Tax Basis		
Opening Balance	518,376	517,934
Opening Balance - Expansion	4,403,931	
Additions	67,971	-
Additions - Expansion	-	
CCA	45,846	20,717
CCA - Expansion	418,373	
Closing Balance	540,501	497,217
Closing Balance - Expansion	3,985,558	

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE
CURRENCY: CA\$000

Breakdown of Revenue Requirements for Comparison with Indicative Tolls

	Fixed Component		Power and Other Variable Cost		
	Expanded System Excl. Westridge	Westridge Marine Terminal	Total	Light Volume	Heavy Volume
Expanded System	940,841		91,058		
Westridge Marine Terminal	(88,888)	88,888	-		
Total	851,953	88,888	91,058		
COST OF SERVICE FIRST-YEAR TOLL					
bbl/day			707,500	211,500	496,000
bbl kms per year (000,000)	294,784	247,414	294,784	88,123	206,661
Heavy / Light premium					20%
Light-Equivalent bbl kms per year (000,000)			336,116	88,123	247,993
Cost per bbl km (000,000)	2.89	0.36	0.27	0.27	0.33
Toll (\$/bbl)					
Edmonton to Kamloops	2.37			0.22	0.27
Edmonton to Sumas	3.17			0.30	0.36
Edmonton to Burnaby	3.32			0.31	0.37
Edmonton to Westridge	3.33	0.41		0.31	0.37
Kamloops to Sumas	0.78			0.07	0.09
Kamloops to Burnaby	0.94			0.09	0.11

Scenario A Case 11.xlsx

TRANS MOUNTAIN EXPANSION WORKSHEET: STANDARD ASSUMPTIONS

CALENDAR:

1 Year	2018
2 Days in Year	365

ASSUMPTIONS:

3 Equity Structure	50.0%
4 Debt Structure	50.0%
5 Equity Rate	10.0%
6 Debt Rate	7.0%
7 Weighted Equity	5.00%
8 Weighted Debt	3.5%
9 Income Tax Rate	25.0%
10 Accounting depreciation rate (base system)	3.06%
11 Accounting depreciation rate (expansion system)	2.66%
12 Accounting depreciation rate (dock system)	2.83%
13 Tax depreciation rate (base system)	8.30%
14 Tax depreciation rate (expansion system)	9.50%
15 Tax depreciation rate (dock system)	4.00%

Working Capital:

16 Days for Working Capital	15
17 Prepaid factor applied to insurance	62.0%

Volume/Distance

	Pipeline kms	Light YR1	Heavy YR1	Total Volume (bpd)	bbl kms / yr (000,000)
18 Edmonton to Kamloops	819.0	9,000	-	9,000	2,690
19 Edmonton to Sumas	1,095.5	45,000	40,000	85,000	33,988
20 Edmonton to Burnaby	1,148.7	25,500	-	25,500	10,692
21 Edmonton to Westridge	1,152.8	132,000	456,000	588,000	247,414
22 Kamloops to Sumas	271.0	-	-	-	-
23 Kamloops to Burnaby	324.2	-	-	-	-
24 Total		211,500	496,000	707,500	294,784

Inputs:

Scenario A:

- Same basic parameters or capital structure, ROE, interest and depreciation as in CAPP 1.3

- 2.5% annual escalation to the entire fixed toll for 20 years

Case #11:

- Full committed volumes (707,500 bpd) and zero uncommitted volumes plus 182,500 bpd of uncommitted volumes.

Capital Structure (%)

1 Equity	50%
2 Debt	50%
3 Cost of Debt	7.0%
4 Toll Annual Inflator	2.5%

Operating Cost Annual Inflators

5 Manpower	4%
6 Insurance	4%
7 Property Taxes	4%
8 Pipeline Costs	4%
9 NEB Cost Recovery	4%
10 Other Fixed	4%

Committed Volume

From:	To:	kbpd
11 Edmonton	Kamloops	9
12 Edmonton	Sumas	85
13 Edmonton	Burnaby	26
14 Edmonton	Westridge	588
15 Kamloops	Sumas	0
16 Kamloops	Burnaby	0
17	Total	708

Uncommitted Volume

From:	To:	kbpd
18 Edmonton	Kamloops	0
19 Edmonton	Sumas	146
20 Edmonton	Burnaby	0
21 Edmonton	Westridge	36.5
22 Kamloops	Sumas	0
23 Kamloops	Burnaby	0
24	Total	182.5

Outputs:

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Annual ROE	15.0%	14.4%	15.2%	16.0%	16.8%	17.7%	18.8%	19.1%	18.9%	19.9%	21.0%	22.2%	23.5%	25.0%	26.5%	28.3%	30.2%	32.3%	34.6%	37.2%

Projected Average ROE 21.7%

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Fixed Toll (\$/bbl)																				
2 Edmonton to Westridge Dock Toll	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99

Average Fixed Toll (\$/bbl) 4.74
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Committed Volume:

Scenario A Case 11.xlsx

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Edmonton	Kamloops	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
2 Edmonton	Sumas	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
3 Edmonton	Burnaby	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
4 Edmonton	Westridge	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0
5 Kamloops	Sumas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Kamloops	Burnaby	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Total	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5	707.5

Fixed Tolls:

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
8 Edmonton	Kamloops	2.37	2.43	2.49	2.55	2.61	2.68	2.74	2.81	2.88	2.96	3.03	3.11	3.18	3.26	3.34	3.43	3.51	3.60	3.69	3.78
9 Edmonton	Sumas	3.17	3.25	3.33	3.41	3.49	3.58	3.67	3.76	3.86	3.95	4.05	4.15	4.26	4.36	4.47	4.59	4.70	4.82	4.94	5.06
10 Edmonton	Burnaby	3.32	3.40	3.49	3.58	3.66	3.76	3.85	3.95	4.04	4.15	4.25	4.36	4.46	4.58	4.69	4.81	4.93	5.05	5.18	5.31
11 Edmonton	Westridge	3.75	3.84	3.94	4.03	4.13	4.24	4.34	4.45	4.56	4.68	4.80	4.91	5.04	5.16	5.29	5.43	5.56	5.70	5.84	5.99
12 Kamloops	Sumas	0.78	0.80	0.82	0.84	0.86	0.89	0.91	0.93	0.95	0.98	1.00	1.03	1.05	1.08	1.11	1.13	1.16	1.19	1.22	1.25
13 Kamloops	Burnaby	0.94	0.96	0.98	1.01	1.03	1.06	1.09	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.36	1.39	1.43	1.46	1.50

Revenue (\$M):

From:	To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
14 Edmonton	Kamloops	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	12	12	12	12
15 Edmonton	Sumas	98	101	103	106	108	111	114	117	120	123	126	129	132	135	139	142	146	149	153	157
16 Edmonton	Burnaby	31	32	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
17 Edmonton	Westridge	804	824	845	866	887	910	932	956	980	1,004	1,029	1,055	1,081	1,108	1,136	1,164	1,193	1,223	1,254	1,285
18 Kamloops	Sumas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Kamloops	Burnaby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Total Revenue	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504

Spot Shipments (kbpd):																								
From:			To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	
1	Edmonton	Kamloops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	Edmonton	Sumas	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	
3	Edmonton	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	Edmonton	Westridge	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	
5	Kamloops	Sumas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	Kamloops	Burnaby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	Total Volume (kbpd)			182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	
8	Available Capacity (kbpd)			890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	
9	Committed Capacity (kbpd)			708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	
10	Total Spot Capacity			183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	
11	85% of Available Capacity			757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	757	
12	TMPL Spot Capacity			49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	
13	Revenue Sharing Capacity			134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	
14	Spot Revenue Sharing %			50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
15	TMPL Volume Share (kbpd)			115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	115.75	
16	Spot Revenue Sharing Volume (kbpd)			66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	66.75	
17	TMPL Spot Revenue (\$M)			153	156	160	164	168	173	177	181	186	190	195	200	205	210	216	221	226	232	238	244	
18	Shipper Spot Revenue (\$M)			88	90	92	95	97	100	102	105	107	110	113	115	118	121	124	127	131	134	137	141	
Spot Tolls (10% premium to 15 year toll)																								
From:			To:	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	
19	Edmonton	Kamloops	2.60	2.67	2.74	2.80	2.87	2.95	3.02	3.09	3.17	3.25	3.33	3.42	3.50	3.59	3.68	3.77	3.87	3.96	4.06	4.16	4.16	
20	Edmonton	Sumas	3.48	3.57	3.66	3.75	3.84	3.94	4.04	4.14	4.24	4.35	4.46	4.57	4.68	4.80	4.92	5.04	5.17	5.30	5.43	5.57	5.57	
21	Edmonton	Burnaby	3.65	3.74	3.84	3.93	4.03	4.13	4.24	4.34	4.45	4.56	4.67	4.79	4.91	5.03	5.16	5.29	5.42	5.56	5.70	5.84	5.84	
22	Edmonton	Westridge	4.12	4.22	4.33	4.44	4.55	4.66	4.78	4.90	5.02	5.15	5.27	5.41	5.54	5.68	5.82	5.97	6.12	6.27	6.43	6.59	6.59	
23	Kamloops	Sumas	0.86	0.88	0.91	0.93	0.95	0.97	1.00	1.02	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.38	
24	Kamloops	Burnaby	1.03	1.06	1.08	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.32	1.35	1.39	1.42	1.46	1.49	1.53	1.57	1.61	1.65	1.65	
25	Weighted Average Toll (\$/bbf)			3.61	3.70	3.79	3.89	3.99	4.08	4.19	4.29	4.40	4.51	4.62	4.74	4.86	4.98	5.10	5.23	5.36	5.49	5.63	5.77	5.77

Income Statement (\$M)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1 Net Rate Base	6,147	6,029	5,910	5,789	5,667	5,542	5,396	5,265	5,131	4,996	4,858	4,718	4,576	4,432	4,285	4,137	3,986	3,833	3,679	3,522
2 % Equity	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
3 % Debt	3,074	3,015	2,955	2,895	2,833	2,771	2,698	2,632	2,566	2,498	2,429	2,359	2,288	2,216	2,143	2,068	1,993	1,917	1,839	1,761
4 Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
5 Revenue: Contract	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
6 Revenue: Spot	941	964	988	1,013	1,039	1,064	1,091	1,118	1,146	1,175	1,204	1,234	1,265	1,297	1,329	1,363	1,397	1,432	1,467	1,504
7 Fixed Operating Costs	153	156	160	164	168	173	177	181	186	190	195	200	205	210	216	221	226	232	238	244
8 EBITDA	229	239	248	258	269	280	291	303	315	328	342	356	370	385	401	417	434	452	470	489
9 Depreciation	864	882	900	919	938	957	977	997	1,017	1,037	1,058	1,079	1,100	1,122	1,144	1,166	1,189	1,212	1,235	1,259
10 Interest	189	191	193	195	198	200	202	204	206	209	211	213	215	217	219	222	224	226	228	230
11 Total	215	211	207	203	198	194	189	184	180	175	170	165	160	155	150	145	140	134	129	123
12 EBT	404	402	400	398	396	394	391	388	386	383	381	378	375	372	369	366	363	360	357	354
13 Taxes	460	480	500	521	542	563	586	608	631	654	677	701	725	750	775	800	826	852	878	905
14 Earnings	-	45	51	58	65	72	79	104	147	157	168	178	187	197	206	215	224	233	242	251
15 ROE	460	435	449	463	477	492	507	504	484	496	510	523	538	553	569	585	601	619	636	654
	15.0%	14.4%	15.2%	16.0%	16.8%	17.7%	18.8%	19.1%	18.9%	19.9%	21.0%	22.2%	23.5%	25.0%	26.5%	28.3%	30.2%	32.3%	34.6%	37.2%

Average ROE
21.7%

Fixed Operating Costs		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1	Manpower	75.8	79.0	82.3	85.8	89.4	93.1	97.1	101.1	105.4	109.8	114.4	119.2	124.2	129.4	134.9	140.5	146.4	152.6	159.0	165.7
2	Insurance	15.1	15.7	16.3	16.9	17.6	18.3	19.1	19.8	20.6	21.4	22.3	23.2	24.1	25.1	26.1	27.1	28.2	29.3	30.5	31.7
3	Property Taxes	56.0	58.2	60.5	62.9	65.5	68.1	70.8	73.6	76.6	79.6	82.8	86.1	89.6	93.2	96.9	100.8	104.8	109.0	113.4	117.9
4	Pipeline Costs	46.6	48.5	50.4	52.5	54.6	56.7	59.0	61.4	63.8	66.4	69.0	71.8	74.7	77.7	80.8	84.0	87.4	90.9	94.5	98.3
5	NEB Cost Recovery	8.3	8.6	9.0	9.3	9.7	10.1	10.5	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.4	14.9	15.5	16.2	16.8	17.5
6	Other Fixed	27.6	28.7	29.8	31.0	32.2	33.5	34.9	36.3	37.7	39.2	40.8	42.4	44.1	45.9	47.7	49.6	51.6	53.7	55.8	58.1
7	Total	229.3	238.7	248.4	258.5	269.0	279.9	291.3	303.2	315.5	328.3	341.7	355.6	370.0	385.1	400.7	417.0	434.0	451.6	470.0	489.1

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RATE BASE & INCOME TAX
CURRENCY: CA\$000

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Operating Expenses								
1 Power	91,058	-	94,700		98,488		102,428	
2 Other Variable	-	-						
3 <u>Total Variable Component</u>	91,058	-	94,700		98,488		102,428	
4 Manpower	72,917	4,475						
5 Insurance	15,058	1,168						
6 Property Taxes	53,849	3,951						
7 Pipeline Costs	43,371	8,682						
8 NEB Cost Recovery	6,927	-						
9 Other Fixed	18,779	-						
10 <u>Total Fixed Component</u>	210,901	18,276	238,669	19,007	248,374	19,767	258,474	20,558
11 <u>Total Operating Expenses</u>	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
Return on Capital								
12 Equity 10%	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
13 Debt 7%	215,159	21,583	211,027	21,255	206,861	20,928	202,629	20,600
14 <u>Total Return</u>	522,528	52,416	512,493	51,619	502,377	50,824	492,099	50,029
15 Depreciation Expense	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
16 <u>Total Capital Cost Recovery</u>	711,497	62,272	703,638	61,489	695,698	60,707	687,597	59,925
Income Tax Provision								
17 Return on Equity	307,370	30,833	301,467	30,364	295,516	29,897	289,470	29,429
Timing Differences:								
18 Capital Cost Allowance (CCA)	(464,219)	(20,717)	(426,310)	(19,889)	(392,024)	(19,093)	(361,016)	(18,329)
19 Depreciation	188,969	9,856	191,145	9,869	193,321	9,883	195,497	9,896
20 Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-
21 Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)
22 <u>Tax Base</u>	30,425	19,505	64,608	19,878	95,119	20,219	122,258	20,528
23 <u>Income Tax Provision*</u>	-	-	-	-	-	-	-	-
24 <u>Income Taxes Payable for WC</u>	-	-	-	-	-	-	-	-
25 Revenue Requirement	1,031,899	81,454	1,037,008	80,496	1,042,561	80,474	1,048,498	80,483
26 Power and Other Variable Costs	91,058	-	94,700	-	98,488	-	102,428	-
Revenue Requirement - Excluding								
27 <u>Power and Other Variable Cost</u>	940,841	81,454	942,308	80,496	944,072	80,474	946,071	80,483

* Zero income tax in the first year due to net operating loss at the end of the construction period.

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Rate Base Calculation								
	Expanded System	Westridge Marine Terminal						
Rate Base								
28 Open Plant in Service	6,857,417	623,164	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565
29 Open Accumulated Depreciation	(677,551)	(3,274)	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)
30 Total Open Net Plant	6,179,866	619,890	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683
31 Depreciation Expense	(188,969)	(9,856)	(191,145)	(9,869)	(193,321)	(9,883)	(195,497)	(9,896)
32 Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467
33 Close Plant in Service	6,928,536	623,631	6,999,655	624,098	7,070,774	624,565	7,141,893	625,032
34 Close Accumulated Depreciation	(866,520)	(13,130)	(1,057,665)	(23,000)	(1,250,986)	(32,882)	(1,446,483)	(42,778)
35 Total Close Net Plant	6,062,016	610,501	5,941,990	601,098	5,819,788	591,683	5,695,410	582,254
36 Average Plant in Service	6,120,941	615,195	6,002,003	605,799	5,880,889	596,390	5,757,599	586,968
37 Average Deferred Income Taxes	-	-	-	-	-	-	-	-
38 Average Working Capital	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
39 Net Rate Base	6,147,391	616,660	6,029,335	607,284	5,910,316	597,934	5,789,404	588,574
Working Capital Provision								
40 Operating Expenses	320,402	19,182	333,370	19,007	346,863	19,767	360,902	20,558
41 Less Insurance	(15,058)	(1,168)	(15,660)	(1,215)	(18,320)	(1,263)	(21,432)	(1,314)
42 Plus Income Taxes Payable	-	-	-	-	-	-	-	-
43 Cash Cost of Service	305,344	18,014	317,709	17,792	328,542	18,504	339,469	19,244
44 Provision for cash requirement	12,548	740	13,057	731	13,502	760	13,951	791
45 Average Prepaid Expenses	9,336	724	9,709	753	11,359	783	13,288	815
46 Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-
47 Average Working Capital Provision	26,450	1,464	27,332	1,484	29,426	1,544	31,805	1,605
Book Basis								
48 Opening Balance	1,550,632	348,278	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679
49 Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
50 Additions	71,119	467	71,119	467	71,119	467	71,119	467
51 Additions - Expansion	-		-		-		-	
52 Closing Balance	1,621,751	348,745	1,692,870	349,212	1,763,989	349,679	1,835,108	350,146
53 Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278	
54 Depreciation Expense	47,449	9,856	49,626	9,869	51,802	9,883	53,978	9,896
55 Depreciation Expense - Expansion	141,519		141,519		141,519		141,519	
56 Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
57 Accumulated Depreciation - Expansion	107,735		249,254		107,735		107,735	
58 Net Book Value	6,101,539	335,972	6,031,139	336,439	6,243,777	336,906	6,314,896	337,373

tax RB depr

Cost of Service Revenue Requirement

0.04

	Expanded System 2018	Westridge Marine Terminal	Expanded System 2019	Westridge Marine Terminal	Expanded System 2020	Westridge Marine Terminal	Expanded System 2021	Westridge Marine Terminal
Tax Basis								
59 Opening Balance	518,373	517,934	540,498	497,217	560,787	477,328	579,392	458,235
60 Opening Balance - Expansion	4,403,931		3,985,558		3,606,930		3,264,271	
61 Additions	67,971	-	67,971	-	67,971	-	67,971	-
62 Additions - Expansion	-		-		-		-	
63 CCA	45,846	20,717	47,682	19,889	49,366	19,093	50,910	18,329
64 CCA - Expansion	418,373		378,628		342,658		310,106	
65 Closing Balance	540,498	497,217	560,787	477,328	579,392	458,235	596,453	439,905
66 Closing Balance - Expansion	3,985,558		3,606,930		3,264,271		2,954,166	
Tax loss Carry fwd								
67 Opening	916,347		889,070		827,610		735,640	
68 Used	30,425		64,608		95,119		122,258	
69 Increase	3,148		3,148		3,148		3,148	
70 Closing	889,070		827,610		735,640		616,530	

tax RB depr

0.04

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Operating Expenses									
Power	106,525		110,786		115,217		119,826		124,619
Other Variable									
Total Variable Component	106,525		110,786		115,217		119,826		124,619
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
Total Fixed Component	268,984	21,380	279,922	22,236	291,306	23,125	303,152	24,050	315,480
Total Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Return on Capital									
Equity 10%	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Debt 7%	198,333	20,272	193,973	19,944	188,858	19,615	184,262	19,286	179,590
Total Return	481,665	49,232	471,078	48,435	458,655	47,636	447,493	46,837	436,148
Depreciation Expense	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Total Capital Cost Recovery	679,339	59,141	670,928	58,357	660,681	57,572	651,695	56,786	642,527
Income Tax Provision									
Return on Equity	283,332	28,960	277,105	28,491	269,797	28,021	263,231	27,551	256,558
Timing Differences:									
Capital Cost Allowance (CCA)	(332,972)	(17,596)	(307,609)	(16,892)	(284,671)	(16,217)	(263,927)	(15,568)	(245,166)
Depreciation	197,674	9,909	199,850	9,922	202,026	9,936	204,202	9,949	206,379
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)	(467)	(1,569)
Tax Base	146,340	20,806	167,651	21,054	185,458	21,273	201,813	21,465	216,076
Income Tax Provision*	-	-	-	-	-	-	24,046	7,155	70,976
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,054,848	80,522	1,061,636	80,593	1,067,204	80,697	1,098,720	87,991	1,153,602
Power and Other Variable Costs	106,525	-	110,786	-	115,217	-	119,826	-	124,619
Revenue Requirement - Excluding Power and Other Variable Cost	948,323	80,522	950,850	80,593	951,987	80,697	978,894	87,991	1,028,983

* Zero income tax in the first year due to n

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,141,893	625,032	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369
Open Accumulated Depreciation	(1,446,483)	(42,778)	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)
Total Open Net Plant	5,695,410	582,254	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133
Depreciation Expense	(197,674)	(9,909)	(199,850)	(9,922)	(202,026)	(9,936)	(204,202)	(9,949)	(206,379)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,213,012	625,499	7,284,131	625,966	7,355,250	626,433	7,426,369	626,900	7,497,488
Close Accumulated Depreciation	(1,644,157)	(52,687)	(1,844,007)	(62,610)	(2,046,033)	(72,545)	(2,250,236)	(82,494)	(2,456,614)
Total Close Net Plant	5,568,855	572,812	5,440,124	563,356	5,309,217	553,888	5,176,133	544,406	5,040,874
Average Plant in Service	5,632,132	577,533	5,504,489	568,084	5,374,670	558,622	5,242,675	549,147	5,108,504
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Net Rate Base	5,666,645	579,202	5,542,092	569,820	5,395,943	560,428	5,264,624	551,025	5,131,156
Working Capital Provision									
Operating Expenses	375,509	21,380	390,708	22,236	406,523	23,125	422,978	24,050	440,099
Less Insurance	(25,073)	(1,366)	(29,331)	(1,421)	-	(1,478)	-	(1,537)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	350,437	20,014	361,377	20,814	406,523	21,647	422,978	22,513	440,099
Provision for cash requirement	14,402	822	14,851	855	16,706	890	17,383	925	18,086
Average Prepaid Expenses	15,545	847	18,186	881	-	916	-	953	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	34,513	1,670	37,603	1,736	21,272	1,806	21,949	1,878	22,652
Book Basis									
Opening Balance	1,835,108	350,146	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	1,906,227	350,613	1,977,346	351,080	2,048,465	351,547	2,119,584	352,014	2,190,703
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	56,154	9,909	58,331	9,922	60,507	9,936	62,683	9,949	64,859
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	6,386,015	337,840	6,457,134	338,307	6,528,253	338,774	6,599,372	339,241	6,670,491

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Tax Basis									
Opening Balance	596,453	439,905	612,097	422,309	626,443	405,417	639,599	389,200	651,662
Opening Balance - Expansion	2,954,166		2,673,520		2,419,535		2,189,680		1,981,660
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	52,326	17,596	53,625	16,892	54,816	16,217	55,907	15,568	56,909
CCA - Expansion	280,646		253,984		229,856		208,020		188,258
Closing Balance	612,097	422,309	626,443	405,417	639,599	389,200	651,662	373,632	662,725
Closing Balance - Expansion	2,673,520		2,419,535		2,189,680		1,981,660		1,793,402
Tax loss Carry fwd									
Opening	616,530		473,338		308,835		126,525		-
Used	146,340		167,651		185,458		129,673		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	473,338		308,835		126,525		-		-

Cost of Service Revenue Requirement

	Expanded System2022	Westridge Marine Terminal	Expanded System2023	Westridge Marine Terminal	Expanded System2024	Westridge Marine Terminal	Expanded System2025	Westridge Marine Terminal	Expanded System2026
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Operating Expenses									
Power		129,604		134,788		140,180		145,787	
Other Variable									
<u>Total Variable Component</u>		<u>129,604</u>		<u>134,788</u>		<u>140,180</u>		<u>145,787</u>	
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>25,012</u>	<u>328,310</u>	<u>26,012</u>	<u>341,662</u>	<u>27,053</u>	<u>355,558</u>	<u>28,135</u>	<u>370,018</u>	<u>29,260</u>
Total Operating Expenses	<u>25,012</u>	<u>457,914</u>	<u>26,012</u>	<u>476,450</u>	<u>27,053</u>	<u>495,737</u>	<u>28,135</u>	<u>515,805</u>	<u>29,260</u>
Return on Capital									
Equity 10%	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Debt 7%	<u>18,956</u>	<u>174,844</u>	<u>18,627</u>	<u>170,022</u>	<u>18,296</u>	<u>165,125</u>	<u>17,966</u>	<u>160,154</u>	<u>17,635</u>
Total Return	<u>46,037</u>	<u>424,621</u>	<u>45,236</u>	<u>412,911</u>	<u>44,434</u>	<u>401,019</u>	<u>43,631</u>	<u>388,945</u>	<u>42,828</u>
Depreciation Expense	<u>9,962</u>	<u>208,555</u>	<u>9,975</u>	<u>210,731</u>	<u>9,988</u>	<u>212,907</u>	<u>10,002</u>	<u>215,084</u>	<u>10,015</u>
Total Capital Cost Recovery	<u>55,999</u>	<u>633,176</u>	<u>55,211</u>	<u>623,642</u>	<u>54,423</u>	<u>613,926</u>	<u>53,633</u>	<u>604,028</u>	<u>52,843</u>
Income Tax Provision									
Return on Equity	27,081	249,777	26,609	242,889	26,138	235,894	25,666	228,791	25,193
Timing Differences:									
Capital Cost Allowance (CCA)	(14,945)	(228,200)	(14,347)	(212,857)	(13,774)	(198,981)	(13,223)	(186,433)	(12,694)
Depreciation	9,962	208,555	9,975	210,731	9,988	212,907	10,002	215,084	10,015
Capitalized Interest	-	(125)	-	(125)	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	21,630	228,438	21,770	239,069	21,886	248,126	21,978	255,748	22,047
Income Tax Provision*	7,210	75,097	7,257	78,640	7,295	81,659	7,326	84,200	7,349
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	88,221	1,166,187	88,480	1,178,733	88,771	1,191,323	89,094	1,204,033	89,452
Power and Other Variable Costs	-	129,604	-	134,788	-	140,180	-	145,787	-
Revenue Requirement - Excluding Power and Other Variable Cost	88,221	1,036,583	88,480	1,043,945	88,771	1,051,143	89,094	1,058,247	89,452

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Rate Base Calculation									
Rate Base									
Open Plant in Service	626,900	7,497,488	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768
Open Accumulated Depreciation	(82,494)	(2,456,614)	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)
Total Open Net Plant	544,406	5,040,874	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347
Depreciation Expense	(9,962)	(208,555)	(9,975)	(210,731)	(9,988)	(212,907)	(10,002)	(215,084)	(10,015)
Capital Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Close Plant in Service	627,367	7,568,607	627,834	7,639,726	628,301	7,710,845	628,768	7,781,964	629,235
Close Accumulated Depreciation	(92,456)	(2,665,169)	(102,431)	(2,875,900)	(112,420)	(3,088,808)	(122,421)	(3,303,891)	(132,436)
Total Close Net Plant	534,911	4,903,438	525,403	4,763,826	515,881	4,622,037	506,347	4,478,073	496,799
Average Plant in Service	539,658	4,972,156	530,157	4,833,632	520,642	4,692,931	511,114	4,550,055	501,573
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Net Rate Base	541,612	4,995,540	532,188	4,857,778	522,755	4,717,870	513,311	4,575,818	503,858
Working Capital Provision									
Operating Expenses	25,012	457,914	26,012	476,450	27,053	495,737	28,135	515,805	29,260
Less Insurance	(1,598)	-	(1,662)	-	(1,729)	-	(1,798)	-	(1,870)
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	23,413	457,914	24,350	476,450	25,324	495,737	26,337	515,805	27,390
Provision for cash requirement	962	18,818	1,001	19,580	1,041	20,373	1,082	21,197	1,126
Average Prepaid Expenses	991	-	1,031	-	1,072	-	1,115	-	1,159
Average Inventory	-	4,566	-	4,566	-	4,566	-	4,566	-
Average Working Capital Provision	1,953	23,384	2,031	24,146	2,113	24,939	2,197	25,763	2,285
Book Basis									
Opening Balance	352,014	2,190,703	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882
Opening Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467	71,119	467	71,119	467
Additions - Expansion		-		-		-		-	
Closing Balance	352,481	2,261,822	352,948	2,332,941	353,415	2,404,060	353,882	2,475,179	354,349
Closing Balance - Expansion		5,320,278		5,320,278		5,320,278		5,320,278	
Depreciation Expense	9,962	67,036	9,975	69,212	9,988	71,388	10,002	73,564	10,015
Depreciation Expense - Expansion		141,519		141,519		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735		107,735		107,735	
Net Book Value	339,708	6,741,610	340,175	6,812,729	340,642	6,883,848	341,109	6,954,967	341,576

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2027	Westridge Marine Terminal	Expanded System2028	Westridge Marine Terminal	Expanded System2029	Westridge Marine Terminal	Expanded System2030	Westridge Marine Terminal
Tax Basis									
Opening Balance	373,632	662,725	358,687	672,869	344,339	682,171	330,566	690,701	317,343
Opening Balance - Expansion		1,793,402		1,623,029		1,468,841		1,329,301	
Additions	-	67,971	-	67,971	-	67,971	-	67,971	-
Additions - Expansion		-		-		-		-	
CCA	14,945	57,827	14,347	58,669	13,774	59,441	13,223	60,149	12,694
CCA - Expansion		170,373		154,188		139,540		126,284	
Closing Balance	358,687	672,869	344,339	682,171	330,566	690,701	317,343	698,523	304,649
Closing Balance - Expansion		1,623,029		1,468,841		1,329,301		1,203,018	
Tax loss Carry fwd									
Opening		-		-		-		-	
Used		3,148		3,148		3,148		3,148	
Increase		3,148		3,148		3,148		3,148	
Closing		-		-		-		-	

Breakdown of Revenue Requirements

Expanded
System2027

Expanded
System2028

Expanded
System2029

Expanded
System2030

Westridge
Marine
Terminal

COST OF SERVICE FIRST-YEAR TOLL

bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
 Edmonton to Kamloops
 Edmonton to Sumas
 Edmonton to Burnaby
 Edmonton to Westridge
 Kamloops to Sumas
 Kamloops to Burnaby

tax RB depr

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Operating Expenses									
Power	151,618		157,683		163,990		170,550		177,372
Other Variable									
<u>Total Variable Component</u>	<u>151,618</u>		<u>157,683</u>		<u>163,990</u>		<u>170,550</u>		<u>177,372</u>
Manpower									
Insurance									
Property Taxes									
Pipeline Costs									
NEB Cost Recovery									
Other Fixed									
<u>Total Fixed Component</u>	<u>385,068</u>	<u>30,431</u>	<u>400,729</u>	<u>31,648</u>	<u>417,028</u>	<u>32,914</u>	<u>433,990</u>	<u>34,231</u>	<u>451,643</u>
Total Operating Expenses	<u>536,686</u>	<u>30,431</u>	<u>558,412</u>	<u>31,648</u>	<u>581,018</u>	<u>32,914</u>	<u>604,540</u>	<u>34,231</u>	<u>629,015</u>
Return on Capital									
Equity 10%	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Debt 7%	<u>155,107</u>	<u>17,304</u>	<u>149,985</u>	<u>16,972</u>	<u>144,788</u>	<u>16,640</u>	<u>139,517</u>	<u>16,308</u>	<u>134,171</u>
Total Return	<u>376,688</u>	<u>42,024</u>	<u>364,249</u>	<u>41,218</u>	<u>351,629</u>	<u>40,412</u>	<u>338,827</u>	<u>39,606</u>	<u>325,843</u>
Depreciation Expense	<u>217,260</u>	<u>10,028</u>	<u>219,436</u>	<u>10,041</u>	<u>221,612</u>	<u>10,055</u>	<u>223,789</u>	<u>10,068</u>	<u>225,965</u>
Total Capital Cost Recovery	<u>593,948</u>	<u>52,052</u>	<u>583,686</u>	<u>51,260</u>	<u>573,241</u>	<u>50,467</u>	<u>562,615</u>	<u>49,673</u>	<u>551,808</u>
Income Tax Provision									
Return on Equity	221,581	24,720	214,264	24,246	206,841	23,772	199,310	23,297	191,672
Timing Differences:									
Capital Cost Allowance (CCA)	(175,085)	(12,186)	(164,823)	(11,699)	(155,543)	(11,231)	(147,151)	(10,781)	(139,563)
Depreciation	217,260	10,028	219,436	10,041	221,612	10,055	223,789	10,068	225,965
Capitalized Interest	(125)	-	(125)	-	(125)	-	(125)	-	(125)
Other timing differences	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>
Tax Base	262,062	22,095	267,184	22,122	271,216	22,129	274,253	22,117	276,380
Income Tax Provision*	86,305	7,365	88,012	7,374	89,356	7,376	90,368	7,372	91,077
Income Taxes Payable for WC	-	-	-	-	-	-	-	-	-
Revenue Requirement	1,216,938	89,847	1,230,110	90,282	1,243,616	90,757	1,257,524	91,276	1,271,900
Power and Other Variable Costs	151,618	-	157,683	-	163,990	-	170,550	-	177,372
Revenue Requirement - Excluding Power and Other Variable Cost	<u>1,065,320</u>	<u>89,847</u>	<u>1,072,427</u>	<u>90,282</u>	<u>1,079,625</u>	<u>90,757</u>	<u>1,086,974</u>	<u>91,276</u>	<u>1,094,528</u>

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Rate Base Calculation									
Rate Base									
Open Plant in Service	7,781,964	629,235	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440
Open Accumulated Depreciation	(3,303,891)	(132,436)	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)
Total Open Net Plant	4,478,073	496,799	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452
Depreciation Expense	(217,260)	(10,028)	(219,436)	(10,041)	(221,612)	(10,055)	(223,789)	(10,068)	(225,965)
Capital Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Close Plant in Service	7,853,083	629,702	7,924,202	630,169	7,995,321	630,636	8,066,440	631,103	8,137,559
Close Accumulated Depreciation	(3,521,151)	(142,464)	(3,740,587)	(152,506)	(3,962,200)	(162,560)	(4,185,988)	(172,628)	(4,411,953)
Total Close Net Plant	4,331,932	487,238	4,183,615	477,663	4,033,121	468,076	3,880,452	458,475	3,725,606
Average Plant in Service	4,405,002	492,018	4,257,773	482,450	4,108,368	472,870	3,956,786	463,275	3,803,029
Average Deferred Income Taxes	-	-	-	-	-	-	-	-	-
Average Working Capital	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Net Rate Base	4,431,624	494,395	4,285,288	484,922	4,136,811	475,440	3,986,197	465,949	3,833,445
Working Capital Provision									
Operating Expenses	536,686	30,431	558,412	31,648	581,018	32,914	604,540	34,231	629,015
Less Insurance	-	(1,945)	-	(2,023)	-	(2,104)	-	(2,188)	-
Plus Income Taxes Payable	-	-	-	-	-	-	-	-	-
Cash Cost of Service	536,686	28,486	558,412	29,626	581,018	30,811	604,540	32,043	629,015
Provision for cash requirement	22,056	1,171	22,948	1,217	23,877	1,266	24,844	1,317	25,850
Average Prepaid Expenses	-	1,206	-	1,254	-	1,304	-	1,356	-
Average Inventory	4,566	-	4,566	-	4,566	-	4,566	-	4,566
Average Working Capital Provision	26,622	2,376	27,514	2,471	28,443	2,570	29,410	2,673	30,416
Book Basis									
Opening Balance	2,475,179	354,349	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655
Opening Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Additions	71,119	467	71,119	467	71,119	467	71,119	467	71,119
Additions - Expansion	-		-		-		-		-
Closing Balance	2,546,298	354,816	2,617,417	355,283	2,688,536	355,750	2,759,655	356,217	2,830,774
Closing Balance - Expansion	5,320,278		5,320,278		5,320,278		5,320,278		5,320,278
Depreciation Expense	75,740	10,028	77,917	10,041	80,093	10,055	82,269	10,068	84,445
Depreciation Expense - Expansion	141,519		141,519		141,519		141,519		141,519
Accumulated Depreciation	732,755	12,773	732,755	12,773	732,755	12,773	732,755	12,773	732,755
Accumulated Depreciation - Expansion	107,735		107,735		107,735		107,735		107,735
Net Book Value	7,026,086	342,043	7,097,205	342,510	7,168,324	342,977	7,239,443	343,444	7,310,562

tax RB depr

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Tax Basis									
Opening Balance	698,523	304,649	705,696	292,464	712,273	280,765	718,305	269,534	723,836
Opening Balance - Expansion	1,203,018		1,088,731		985,302		891,698		806,987
Additions	67,971	-	67,971	-	67,971	-	67,971	-	67,971
Additions - Expansion	-		-		-		-		-
CCA	60,798	12,186	61,394	11,699	61,939	11,231	62,440	10,781	62,899
CCA - Expansion	114,287		103,429		93,604		84,711		76,664
Closing Balance	705,696	292,464	712,273	280,765	718,305	269,534	723,836	258,753	728,907
Closing Balance - Expansion	1,088,731		985,302		891,698		806,987		730,323
Tax loss Carry fwd									
Opening	-		-		-		-		-
Used	3,148		3,148		3,148		3,148		3,148
Increase	3,148		3,148		3,148		3,148		3,148
Closing	-		-		-		-		-

Cost of Service Revenue Requirement

	Expanded System2031	Westridge Marine Terminal	Expanded System2032	Westridge Marine Terminal	Expanded System2033	Westridge Marine Terminal	Expanded System2034	Westridge Marine Terminal	Expanded System2035
Breakdown of Revenue Requirements 1									

Expanded System
Westridge Marine Terminal
Total

COST OF SERVICE FIRST-YEAR TOLL
bbl/day
bbl kms per year (000,000)
Heavy / Light premium
Light-Equivalent bbl kms per year (000,00
Cost per bbl km (000,000)

Toll (\$/bbl)
Edmonton to Kamloops
Edmonton to Sumas
Edmonton to Burnaby
Edmonton to Westridge
Kamloops to Sumas
Kamloops to Burnaby

TRANS MOUNTAIN EXPANSION
WORKSHEET: COST OF SERVICE, RA1
CURRENCY: CA\$000

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Operating Expenses					
Power		184,467		191,845	
Other Variable					
<u>Total Variable Component</u>		<u>184,467</u>		<u>191,845</u>	
Manpower					
Insurance					
Property Taxes					
Pipeline Costs					
NEB Cost Recovery					
Other Fixed					
<u>Total Fixed Component</u>	<u>35,600</u>	<u>470,014</u>	<u>37,024</u>	<u>489,132</u>	<u>38,505</u>
Total Operating Expenses	<u>35,600</u>	<u>654,480</u>	<u>37,024</u>	<u>680,978</u>	<u>38,505</u>
Return on Capital					
Equity 10%	22,822	183,928	22,347	176,077	21,871
Debt 7%	<u>15,976</u>	<u>128,750</u>	<u>15,643</u>	<u>123,254</u>	<u>15,310</u>
Total Return	38,798	312,677	37,990	299,331	37,181
Depreciation Expense	<u>10,081</u>	<u>228,141</u>	<u>10,094</u>	<u>230,317</u>	<u>10,107</u>
Total Capital Cost Recovery	<u>48,879</u>	<u>540,818</u>	<u>48,084</u>	<u>529,648</u>	<u>47,288</u>
Income Tax Provision					
Return on Equity	22,822	183,928	22,347	176,077	21,871
Timing Differences:					
Capital Cost Allowance (CCA)	(10,350)	(132,701)	(9,936)	(126,496)	(9,539)
Depreciation	10,081	228,141	10,094	230,317	10,107
Capitalized Interest	-	(125)	-	(125)	-
Other timing differences	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>	<u>(1,569)</u>	<u>(467)</u>
Tax Base	22,086	277,674	22,038	278,204	21,973
Income Tax Provision*	7,362	91,509	7,346	91,685	7,324
Income Taxes Payable for WC	-	-	-	-	-
Revenue Requirement	91,841	1,286,808	92,454	1,302,311	93,117
Power and Other Variable Costs	-	184,467	-	191,845	-
Revenue Requirement - Excluding Power and Other Variable Cost	91,841	1,102,341	92,454	1,110,466	93,117

0.90%

* Zero income tax in the first year due to n

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Rate Base Calculation					
Rate Base					
Open Plant in Service	631,103	8,137,559	631,570	8,208,678	632,037
Open Accumulated Depreciation	(172,628)	(4,411,953)	(182,709)	(4,640,094)	(192,803)
Total Open Net Plant	458,475	3,725,606	448,861	3,568,584	439,234
Depreciation Expense	(10,081)	(228,141)	(10,094)	(230,317)	(10,107)
Capital Additions	467	71,119	467	71,119	467
Close Plant in Service	631,570	8,208,678	632,037	8,279,797	632,504
Close Accumulated Depreciation	(182,709)	(4,640,094)	(192,803)	(4,870,412)	(202,910)
Total Close Net Plant	448,861	3,568,584	439,234	3,409,385	429,594
Average Plant in Service	453,668	3,647,095	444,048	3,488,985	434,414
Average Deferred Income Taxes	-	-	-	-	-
Average Working Capital	2,780	31,462	2,891	32,551	3,007
Net Rate Base	456,448	3,678,557	446,939	3,521,536	437,421
Working Capital Provision					
Operating Expenses	35,600	654,480	37,024	680,978	38,505
Less Insurance	(2,275)	-	(2,366)	-	(2,461)
Plus Income Taxes Payable	-	-	-	-	-
Cash Cost of Service	33,325	654,480	34,658	680,978	36,044
Provision for cash requirement	1,370	26,896	1,424	27,985	1,481
Average Prepaid Expenses	1,411	-	1,467	-	1,526
Average Inventory	-	4,566	-	4,566	-
Average Working Capital Provision	2,780	31,462	2,891	32,551	3,007
Book Basis					
Opening Balance	356,217	2,830,774	356,684	2,901,893	357,151
Opening Balance - Expansion		5,320,278		5,320,278	
Additions	467	71,119	467	71,119	467
Additions - Expansion		-		-	
Closing Balance	356,684	2,901,893	357,151	2,973,012	357,618
Closing Balance - Expansion		5,320,278		5,320,278	
Depreciation Expense	10,081	86,622	10,094	88,798	10,107
Depreciation Expense - Expansion		141,519		141,519	
Accumulated Depreciation	12,773	732,755	12,773	732,755	12,773
Accumulated Depreciation - Expansion		107,735		107,735	
Net Book Value	343,911	7,381,681	344,378	7,452,800	344,845

tax RB depr

Cost of Service Revenue Requirement

	Westridge Marine Terminal	Expanded System2036	Westridge Marine Terminal	Expanded System2037	Westridge Marine Terminal
Tax Basis					
Opening Balance	258,753	728,907	248,403	733,558	238,467
Opening Balance - Expansion		730,323		660,942	
Additions	-	67,971	-	67,971	-
Additions - Expansion		-		-	
CCA	10,350	63,320	9,936	63,706	9,539
CCA - Expansion		69,381		62,790	
Closing Balance	248,403	733,558	238,467	737,823	228,928
Closing Balance - Expansion		660,942		598,153	
Tax loss Carry fwd					
Opening		-		-	
Used		3,148		3,148	
Increase		3,148		3,148	
Closing		-		-	

Cost of Service Revenue Requirement

Breakdown of Revenue Requirements 1

Westridge
Marine
Terminal

Expanded
System2036

Westridge
Marine
Terminal

Expanded
System2037

Westridge
Marine
Terminal

Expanded System
Westridge Marine Terminal

Total

COST OF SERVICE FIRST-YEAR TOLL

bbl/day

bbl kms per year (000,000)

Heavy / Light premium

Light-Equivalent bbl kms per year (000,00

Cost per bbl km (000,000)

Toll (\$/bbl)

Edmonton to Kamloops

Edmonton to Sumas

Edmonton to Burnaby

Edmonton to Westridge

Kamloops to Sumas

Kamloops to Burnaby