

Trans Mountain Pipeline ULC
Application for Interim Commencement Date Tolls and Other Matters related to
the Transportation of Petroleum on the Expanded Trans Mountain Pipeline
System
RH-002-2023

Trans Mountain's Financial Viability and Market Impact

Prepared for

Tsleil-Waututh Nation

Prepared by

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1.0 EXECUTIVE SUMMARY

1.1 Scope of Work

1. I was retained by West Coast Environmental Law Association on behalf of Tsleil-Waututh Nation (TWN) to provide an expert report in response to Issues 2 and 3 in the Canada Energy Regulators List of Issues for Trans Mountain Pipeline ULC Application for Interim Commencement Date Tolls and Other Matters related to the Transportation of Petroleum on the Expanded Trans Mountain Pipeline System.
2. List of Issues 2 asks “Whether the tolls determined to align with the RH-001-2012 Tolling Methodology are expected to be just and reasonable, and not unjustly discriminatory.”
3. List of Issues 3 asks “Whether alternatives or modifications to the RH-001-2012 Tolling Methodology are warranted, including based upon consideration of:
 - a. The potential implications for Trans Mountain’s financial position related to the level of Trans Mountain’s tolls; and
 - b. The potential market impacts related to the level of Trans Mountain’s tolls.”

1.2 The Tolling Methodology delivers insufficient revenue

4. The Canada Energy Regulator’s (CER or Commission, formerly the NEB or Board) List of Issues 2 asks whether the tolls determined by Trans Mountain’s RH-001-2012 Tolling Methodology are expected to be just and reasonable and not unjustly discriminatory. List of Issues 3 asks whether alternatives or modifications are warranted based on a consideration of the impact alternatives or modifications would have on Trans Mountain’s financial position and the market.
5. The CER’s established Tolling Principles include the Fair Return Standard, the Cost Based/User Pay Principle, and the Economic Efficiency Principle.
6. When a tolling methodology is seen to be just and reasonable and not unjustly discriminatory, it is also seen to serve the public interest.
7. An evaluation of Trans Mountain’s Tolling Methodology, the impact of the tolls the methodology delivers on Trans Mountain’s financial position, or the impact of the tolls on the market must recognize the nature and extent of the revenue shortfall that Trans Mountain’s Quantitative Financial Outlooks rely upon.
8. The revenue shortfall of Trans Mountain’s \$34.5 billion project falls within the range of \$20 billion, in current dollars, under a Net Present Value (NPV) assessment.

9. Returns have fallen from Trans Mountain's commercially required unlevered 12% - 15% to 3% - 4% under an Internal Rate of Return (IRR) assessment.
10. Trans Mountain's Tolling Methodology does not satisfy the Fair Return Standard because it does not allow the company to earn a market rate of return, achieve financial integrity, or attract capital. The Tolling Methodology delivers insufficient revenue that:
 - a) puts sound integrity management and environmental protection decisions at risk;
 - b) puts Trans Mountain's ability to meet its operating and financial obligations at risk;
 - c) puts Trans Mountain's ability to continue as a going concern at risk; and
 - d) heavily subsidizes shippers' tolls leading to distorted market signals and an overinvestment in heavy oil production leading to inefficient increased demand for pipeline capacity.
11. All of this is based on Trans Mountain's Best-Case scenario which makes optimistic assumptions and underestimates credible risk.
12. Trans Mountain's Tolling Methodology is a Negotiated Settlement. Toll Hearing RH-001-2012 examined the circumstances and factors relevant to that negotiated methodology. The Commission approved it in 2013 with an understanding that Trans Mountain—as a commercially sophisticated party—would be constrained by market forces and make its investment decisions accordingly.
13. The Commission determined that “If Trans Mountain is prepared to expand its Current System on the basis of the applied-for toll methodology, it is because, in Trans Mountain's own assessment, it will have a reasonable opportunity to recover its prudently incurred costs, including its cost of capital, over the life of the Expanded System. If Trans Mountain believes it has a reasonable opportunity to recover its cost of capital under the proposed toll methodology, the Board is of the view that the requirements of the Fair Return Standard are met.”¹
14. The Negotiated Settlement was approved in 2013 on the basis that the Fair Return Standard would be met. Trans Mountain's required return was achieved at a projected capital cost of \$5.4 billion because all project costs, return on and of capital, and the operating cost risk were covered by the toll revenue expected from committed shippers who signed long-term take or pay contracts.
15. Trans Mountain received a Certificate of Public Convenience and Necessity (CPCN) from the Commission in 2016 and delivered a pre-construction budget to its oil product shippers for approval. By this time project cost had reached \$7.4 billion. Oil product shippers continued to be 100% responsible for the capital cost of Trans Mountain's expansion.

¹ National Energy Board, Application pursuant to Part IV, Reasons for Decision, RH-001-2012, May 2013, [A51913-1](#), p. 26, PDF p. 38.

16. Once project costs exceeded the CPCN cost estimate of \$7.4 billion, capital cost sharing terms contained within the Tolling Methodology were triggered. Project costs were categorized into capped and uncapped, with uncapped costs passed through to shipper tolls at a rate of \$0.07 per \$100 million. Trans Mountain retained the financial responsibility for capped costs.
17. Retaining capped costs exposed Trans Mountain to financial risk. This capital cost sharing feature of the long-term take or pay contracts began to erode Trans Mountain's anticipated returns. On April 8, 2018, Kinder Morgan suspended the project.²
18. The Government of Canada purchased Trans Mountain in June 2018 when the project cost was \$9.3 billion.³ The change in ownership was significant. Trans Mountain ceased to be driven solely by commercial considerations and its investment decisions were no longer disciplined by financial market constraints.
19. The Trans Mountain Corporation (TMC) Board of Directors approved an increase in project cost to \$12.6 billion in June 2019.⁴ On February 18, 2022, it was announced the expected cost had reached \$21.4 billion.⁵ On March 10, 2023, TMC announced that the project cost had increased to \$30.9 billion.⁶ On October 9, 2024, Trans Mountain confirmed that the project cost had climbed to \$34.5 billion.⁷
20. Nineteen billion dollars of project cost has not been passed through to shipper tolls because of the capital cost sharing feature embedded in the Tolling Methodology. At a capital cost of \$34.5 billion shipper tolls cover \$15.5 billion or 45% of project cost.
21. Trans Mountain bears more than half the cost of the project and relies on Government of Canada debt and equity financing and Government of Canada loan guarantees to do so.
22. Shippers bearing 45% of project cost results in a Base Fixed Toll of \$11.46 per barrel.⁸ However, at 100% of project cost, the Base Fixed Toll would be \$24.71 per barrel. Nineteen billion dollars of project cost not passed through to tolls represents a Based Fixed Toll benefit to shippers of \$13.25 per barrel.
23. Trans Mountain's Tolling Methodology does not meet the Fair Return Standard because the tolls determined by the methodology result in a significant revenue shortfall. The Tolling Methodology does not meet the Cost Based/User Pay Principle, or the Economic Efficiency Principle because the tolls determined by the methodology cover less than half the project cost and result in a significant subsidy.

² Press Release, Kinder Morgan Canada Limited, [Kinder Morgan Canada Limited Suspends Non-Essential Spending on Trans Mountain Expansion Project](#), April 8, 2018.

³ Trans Mountain, Class 2 Cost Estimate, December 24, 2019, PS_CPM_1.01b_00004, [A9E6G1](#), PDF p. 5.

⁴ Canada Development Investment Corporation, [2021 – 2025 Corporate Plan Summary](#), December 2020, PDF p. 3.

⁵ Press Release, [Trans Mountain Corporation Updates Expansion Project Cost and Schedule](#), February 18, 2022.

⁶ Press Release, [Trans Mountain Corporation Provides Update on the Expansion Project](#), March 10, 2023.

⁷ Trans Mountain Pipeline ULC, Response to CER IR No. 5, [A9D9W1](#), p. 4, PDF p. 5.

⁸ *Ibid.*, p. 6, PDF p. 7.

1.3 Alternatives or Modifications are warranted

24. Alternatives or modifications to the Tolling Methodology that raise the tolls are warranted since the Tolling Methodology delivers tolls that are insufficient to meet the Fair Return Standard, or the Cost Based/User Pay and Economic Efficiency Principles.
25. The tolling methodology needs to be altered or modified to remove the toll subsidy which distorts market signals and investment decisions.
26. The Tolling Methodology needs to be altered or modified to increase tolls to remove the likelihood that Trans Mountain's corporate culture promotes systemic risk.

1.4 Potential implications for Trans Mountain's financial position

27. The analyses undertaken in this report point to the need for approximately \$20 billion in additional revenue, in current value, over the life of the contracts to provide Trans Mountain sufficient financial resiliency to meet its financial obligations and provide a market return to its investors.
28. Once the Tolling Methodology is altered or modified to ensure tolls will be raised sufficiently to meet the Fair Return Standard over the life of the contracts Trans Mountain's financial integrity, ability to attract capital, and comparable investment criteria will be met.
29. Adherence to the Fair Return Standard will support Trans Mountain with greater financial certainty and stability to ensure pipeline safety and integrity is maintained and that necessary and ongoing maintenance capital is undertaken to protect the pipeline assets.
30. Trans Mountain will be able to attract capital in financial markets without needing its risk underwritten by government support.
31. Trans Mountain will be able to better match its debt structure with a term to maturity that reflects the revenue stream that underpins long term take or pay contracts rather than rely on short term debt that adds to its risk, interest rate vulnerability and likelihood of debt default.
32. Satisfying the Fair Return Standard and the Cost Based/User Pay Principle will remove the toll subsidy oil product shippers are currently positioned to received. This will promote more efficient decision making with respect to the demand for pipeline service and reduce overinvestment in pipeline infrastructure thereby satisfying the Economic Efficiency Principle.

1.5 Potential market impacts

33. Trans Mountain's evidence suggests there is not a significant market impact from its applied for tolls. The evidence reasons that committed shippers must pay the fixed toll whether they

ship or not and therefore, the applied for toll does not influence the volume they would ship on the expansion. With respect to uncommitted volumes, Trans Mountain's evidence suggests the toll could influence spot shipments but because spot capacity represents such a small proportion of total takeaway capacity, any impact would be immaterial.⁹

34. Based on this logic, even higher tolls that cover the cost of the project would not be expected to have an impact on the market. However, Trans Mountain's evidence reflects a narrow assessment of market impact. It does not consider the impact toll expense might have on individual shipper operations and how this might impact all market decisions, not simply the decision to ship product along Trans Mountain.
35. Raising tolls beyond those determined by the Tolling Methodology means shippers would pay higher tolls than what they would pay if they continued to be heavily subsidized. Cash flow impact is an important consideration when assessing market impact.
36. If Trans Mountain's tolls are raised to cover the cost of the project, it is not anticipated that materially negative market consequences would result. This is because the benefit most committed shippers say they receive from the expansion is an offset against the price they would be required to pay to ensure tolls cover the cost of the project.
37. Higher tolls will increase each shippers' transportation expense and reduce cash flow if everything else is constant. However, not everything else is constant. Trans Mountain's expansion has already had a significant beneficial impact on the market according to oil producers who are shippers in this proceeding.
38. Trans Mountain's committed shippers are large, sophisticated parties who produce most of the crude oil in Western Canada and therefore these shippers effectively are the market. They benefit from Trans Mountain's expansion, and they benefit from the impact Trans Mountain's expansion has on the market.
39. According to oil producers, one of the impacts Trans Mountain's expansion has had is to narrow the WTI-WCS price differential. These shippers tell us that this has led to an increase in revenue for all barrels produced, not only an increase in revenue for the barrels shipped on Trans Mountain's system.
40. Trans Mountain's expanded capacity has also facilitated an increase in crude oil production allowing oil producers to not only realize higher prices for the barrels they ship on Trans Mountain, but additional profits from the expanded output made possible because of Trans Mountain's expanded capacity.
41. According to oil producers who are also shippers, the value of Trans Mountain's expansion goes beyond access to committed capacity. It includes access to new markets, improved

⁹ Trans Mountain, Application for Approval of Final Interim Tolls and Related Matters, Additional Written Evidence, Market Impact of Expanded Trans Mountain Tolls, Muse Stancil, December 15, 2023, [A8V3C0](#), pp. 5-7, PDF pp. 190-192.

differentials, expanded profitable output, and improved efficiencies. These impacts have positive cash flow benefits.

42. Trans Mountain's expansion directly and indirectly benefits committed shippers. The extent of the benefits they say they receive means they are likely to choose to pay higher tolls to cover the cost of the expansion than not use the pipeline to avoid paying for it. Further, given current production levels, they are unlikely to alter their decisions to supply product to the entire market if Trans Mountain's tolls were raised to satisfy the Fair Return Standard.
43. Finally, Trans Mountain's expansion which benefits committed shippers is based on a Tolling Methodology that delivers a significant subsidy. When shippers who use the system do not pay for its cost—when the Cost Based/User Pay principle is not met—market signals are distorted and inefficiencies result. This subsidy has a negative potential market impact which will be removed if shippers who use Trans Mountain pay for its expansion.
44. It is recommended that Trans Mountain and the committed shippers modify the Tolling Methodology, with guidance from the CER, to capture \$20 billion in current dollars over the life of the contracts.

2.0 INTRODUCTION

2.1 Scope of Work

45. I was retained by West Coast Environmental Law Association on behalf of Tsleil-Waututh Nation (TWN) to provide an expert report in response to Issues 2 and 3 in the Canada Energy Regulators List of Issues for Trans Mountain Pipeline ULC Application for Interim Commencement Date Tolls and Other Matters related to the Transportation of Petroleum on the Expanded Trans Mountain Pipeline System.
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47. List of Issues 3 asks “Whether alternatives or modifications to the RH-001-2012 Tolling Methodology are warranted, including based upon consideration of:
 - a. The potential implications for Trans Mountain's financial position related to the level of Trans Mountain's tolls; and
 - b. The potential market impacts related to the level of Trans Mountain's tolls.”

2.2 Statement of Qualifications

Education

I hold a Bachelor of Arts degree with a focus on Canadian history and economics from the University of British Columbia and a Master of Arts degree in economics from the University of British Columbia.

Experience

I was employed as a capital budget analyst for the Crown Investment Corporation of the Government of Saskatchewan with responsibility for several crown corporations including Saskatchewan Government Insurance (SGI). Subsequently, I was hired by SGI to evaluate and restructure its auto insurance operation that had suffered significant financial loss.

I then became senior economist for BC Central Credit Union (now Central 1) which functions as a central banking services entity for the credit union system in British Columbia. In that capacity I was responsible for providing analysis and research on the BC economy for the benefit of credit union executives and members. I was also responsible for establishing an equity share system for credit unions throughout the province that many credit unions adopted.

I have held executive positions in the private sector including VP Finance for Parklane Ventures, British Columbia's largest home builder, and Executive Director of Vancity Community Foundation. From 1992–1993 I was President and CEO of the Insurance Corporation of British Columbia.

In 1996 I established a consulting firm and have provided economic analysis, business development, and related advice to a variety of clients in the public and private sector. In 1998 I was appointed as Economic and Financial Advisor to the Royal Commission on the Quality of Condominium Construction in British Columbia.

I was Economic and Financial Advisor to the Fox Lake Cree Nation in negotiations with Manitoba Hydro on the Conawapa Generating Station.

I was a qualified expert witness for the Alberta Federation of Labour during the NEB review of Northern Gateway and prepared evidence on the economic and market impact as well as the need and financial risk of the Project. I appeared as a witness on behalf of AFL which represents Alberta's 170,000 unionized workers.

I was an expert intervenor during the Trans Mountain Part III Hearing and have appeared as a qualified expert intervenor before the BC Utilities Commission. As well, I have served as an expert witness for the BC Supreme Court.

I prepared an expert report titled "Need for, Commercial Feasibility, and Economic Impact of the Trans Mountain Expansion Project" for Tsleil-Waututh Nation in 2016 which was submitted to the Federal Government.

A copy of my curriculum vitae is attached as Appendix 1 and highlights some of my recent academic and technical publications.

2.3 Expert's Duty

I have prepared this report in accordance with my duty as an expert. In preparing this report, I acknowledge that it is my duty to:

- (a) provide evidence that is fair, objective, and non-partisan;
- (b) provide evidence that is related only to matters within my area of expertise; and
- (c) provide such additional assistance as may reasonably be required to determine a matter in issue.

I acknowledge that my duty is to assist the regulatory process and not to act as an advocate for any party. This duty prevails over any obligation that I may owe any party, including TWN on whose behalf I have been engaged.

A signed certificate of expert's duty is included as Appendix 2.

2.4 Documents Reviewed

For the preparation of this Report, I have reviewed the Application Hearing Record including attachments, the letters filed by Trans Mountain and Intervenors, and Trans Mountain's responses to the CER's Information Requests and Intervenor Information Requests. I have not had access to or reviewed any materials on the hearing record that are subject to confidentiality.

I have also reviewed the RH-001-2012 Application Hearing Record, Trans Mountain Corporation's (TMC) and its parent, Canada Development Investment Corporation's (CDEV), Five Year Corporate Plan Summaries and quarterly and annual financial statements released publicly by both entities.

I have formed my opinions and conclusions provided in this Report based on materials noted above, my more than 40 years of experience in government, the private sector, and the insurance, finance, construction, and energy industries, including as an expert witness at the Northern Gateway Part III Hearing, and more than a decade of experience with the Trans Mountain Expansion Project including as an expert intervenor at the Part III Hearing.

3.0 ARE TOLLS EXPECTED TO BE JUST AND REASONABLE UNDER RH-001-2012 TOLLING METHODOLOGY?

3.1 The Tolling Methodology delivers insufficient revenue

48. CER's List of Issues 2 asks, "Whether the tolls determined to align with the RH-001-2012 Tolling Methodology are expected to be just and reasonable, and not unjustly discriminatory."¹⁰
49. Tolls determined under RH-001-2012 result in tolls that are far below tolls which would exist if:
- i) a company, driven by market considerations to achieve a rate of return comparable to investments of similar risk, protect its financial integrity, and attract capital on reasonable terms, had expanded the Trans Mountain system;
 - ii) the oil product shippers who use Trans Mountain's system were to pay for its cost; or
 - iii) the competitive market determined the tolls based on the value shippers receive from the expansion.
50. Trans Mountain's Tolling Methodology results in tolls that deliver insufficient revenue violating the Fair Return Standard as well the Cost Based/User Pay and Economic Efficiency Principles.
51. Financial integrity is threatened when tolls deliver insufficient revenue, giving rise to negative implications for pipeline safety and integrity. Chronic revenue shortfalls incentivize the development of a corporate culture that deviates from sound decision making and over time can lead to systemic failure.
52. Trans Mountain's Tolling Methodology results in a significant toll subsidy when shippers who receive the benefit from the system do not pay for it.
53. Toll subsidies incentivize over-investment in oil production leading to inefficient increased demand for pipeline capacity which in turn falsely inflates the demand for pipeline services and leads to an over-investment in pipeline infrastructure.
54. Trans Mountain has over-estimated likely revenues and underestimated likely costs and cannot meet all the financial obligations it is likely to encounter over the term of the 20-year take or pay contracts.

¹⁰ Canada Energy Regulator, Commission Letter, October 12, 2023, Appendix 1, List of Issues, [A8T3R6](#), p. 1, PDF p. 7.

55. If all parties involved had continued to act on a commercial basis—as the Commission expected when it approved the Tolling Methodology—the project would likely not have been built under the terms of the Negotiated Settlement.

3.2 Criteria for just and reasonable tolls

56. When the Commission approved Trans Mountain’s Tolling Methodology it found that the tolls determined by it would be just and reasonable and not unjustly discriminatory. The Commission determined the tolls would not be too high because Trans Mountain did not rely on market power during negotiations.¹¹ The Commission determined the tolls would not be too low because Trans Mountain would rely on sophisticated decision making driven by commercial considerations:¹²

“If Trans Mountain is prepared to expand its Current System on the basis of the applied-for toll methodology, it is because, in Trans Mountain’s own assessment, it will have a reasonable opportunity to recover its prudently incurred costs, including its cost of capital, over the life of the Expanded System. If Trans Mountain believes it has a reasonable opportunity to recover its cost of capital under the proposed toll methodology, the Board is of the view that the requirements of the Fair Return Standard are met.”¹³

57. The Fair Return Standard “establishes the requirements that must be met by the return allowed to a utility. The Fair Return Standard requires that a return:

- be comparable to the return available from the application of the invested capital to other enterprises of like risk (comparable investment requirement);
- enables the financial integrity of the regulated enterprise to be maintained (financial integrity requirement); and
- permits incremental capital to be attracted to the enterprise on reasonable terms and conditions (capital attraction requirement).”¹⁴

58. The Fair Return Standard represents an appropriate test for whether the tolls are just and reasonable, just as it did during RH-001-2012. As well, there are two toll principles that are relevant. The Cost Causation or Cost-Based/User Pay, and Economic Efficiency Principles.

59. The Cost Causation, or the Cost-Based/User-Pay Principle, refers to the notion that users of a pipeline system should bear the financial responsibility for the system. “In determining whether tolls are just and reasonable, the Board has historically relied on fundamental tolling principles, including the principle of cost-based/user-pay tolls. The Board has stated that tolls should be, to the greatest extent possible, cost based and that users of a pipeline system

¹¹ *Supra*, n1, [A51913-1](#), p. 19, PDF p. 31.

¹² *Ibid* p. 26, PDF p. 38.

¹³ *Ibid*.

¹⁴ *Ibid*, p.vi, PDF p. 10.

should bear the financial responsibility for the costs caused by the transportation of their product through the pipeline.”¹⁵

60. The Economic Efficiency Principle refers to the notion that tolls should promote proper price signals to protect against overinvestment as well as lead to the minimum cost and maximum use of a pipeline.¹⁶

3.3 Fair Return Standard is not satisfied

61. Trans Mountain has submitted five rounds of financial outlooks over the course of the hearing:

- i) CER IR Response No. 1.4, Table 1.4-3 Trans Mountain Financial Ratios Table submitted August 16, 2023, reflecting financial performance scenarios for the first three years of operation;¹⁷
- ii) CER IR Response No. 2.1 Attachment Quantitative Financial Outlooks filed February 26, 2024, reflecting expected financial performance over the life of the 20-year take or pay contracts;¹⁸
- iii) CER IR Response No.3.1 Attachment Updated Quantitative Financial Outlooks filed April 9, 2024, with revisions and corrections to the 20-year Quantitative Financial Outlooks filed in CER IR Response No. 2.1;¹⁹
- iv) CER IR Response No.4.1 Attachment 4.1-2 Quantitative Financial Outlooks submitted July 10, 2024, reflecting a \$34.2 billion capital cost and responding to the CER request for present value calculations;²⁰ and
- v) TWN IR Response No. 2.3t Quantitative Financial Outlook TWN Motion Update submitted November 19, 2024, incorporating increased debt, and slightly revised expense figures with no change to revenue from 4.1-2 but responding to TWN’s request for Cost-of-Service information for 2024 and 2025.²¹

¹⁵ National Energy Board, Letter Decision [RH-001-2018](#), PDF p. 17.

¹⁶ National Energy Board, Reasons for Decision, [RH-1-2007](#), July 2007, p. 22, PDF p. 34.

¹⁷ Trans Mountain Response to CER IR No.1, [A8S1R3](#), August 16, 2023, PDF p. 23.

¹⁸ Trans Mountain Response to CER IR No.2, [A8W4V9](#), February 26, 2024, PDF pp. 1-6.

¹⁹ Trans Mountain Response to CER IR No.3, [A8X5E4](#), April 9, 2024, PDF pp. 2-4.

²⁰ Trans Mountain Response to CER IR No.4, [A9C4T4](#), July 10, 2024, PDF pp. 14-19.

²¹ Trans Mountain, Supplemental Response, Tsleil-Waututh Nation, Attachment 2.3t, Quantitative Financial Outlook, TWN Motion Update [A9F3D8](#), PDF pp. 2-3.

Trans Mountain submitted an update to its CER IR No. 4.1-2 Quantitative Financial Outlook in Response to TWN IR No. 2 on November 19, 2024. Trans Mountain was asked to incorporate the anticipated increase in its debt load into its Quantitative Outlooks, which it did. Trans Mountain also elected to take the opportunity to reduce its operating expenses in 2024 and revise them for ensuing years. Evidence suggests that the revenue projections should have been adjusted downwards as well, but Trans Mountain left its revenue unchanged. As a result of Trans Mountain’s changes to its expense items, lack of revision to its revenue stream and absence of Present Value calculations as requested, the updated outlooks are not as reliable as the information provided in CER Response 4.1-2. Therefore, Financial Outlooks 4.1-2 are relied on in this Report for NPV and IRR analyses. See Appendix 3.4 for further detail as to why Trans Mountain’s revenue projections for 2024 appear to warrant downward revision.

62. The CER requested in IR No. 4.1(b) that Trans Mountain provide Quantitative Financial Outlooks based on a rate base that includes Trans Mountain’s current expectation of the level of as-built costs which at that time were \$34.2 billion, and tolls that reflect this cost under three capacity utilization scenarios. The three scenarios requested were:
- i) 96% utilization of nominal capacity;
 - ii) uncommitted capacity is 50% utilized in the near and medium term; and
 - iii) uncommitted capacity is entirely unutilized in the near and medium term.²²
63. Trans Mountain responded with Quantitative Financial Outlooks Attachment 4.1-2. These pro forma statements provide revenues, operating expenses, debt service and return on equity over the 20-year term of the shipper take-or-pay contracts (line items 1- 48). The statements also provide annual present value calculations based on Trans Mountain’s anticipated cash flow on an unlevered and levered basis (line items 50 – 65).²³
64. Although not requested to do so, for “illustrative purposes” Trans Mountain included a recapitalization strategy for each scenario effective January 1, 2025, based on a debt equity ratio of 55/45. As of January 24, 2025, Trans Mountain’s capital structure was not altered from its current 78/22 debt equity ratio.
65. The three Quantitative Financial Outlook scenarios differed only based on uncommitted or spot capacity utilization assumptions. The three scenarios are identified as CER 4.1b.1, CER 4.1b.2 and CER 4.1b.3.
66. Scenario CER 4.1b.1 based on a 96% capacity utilization beginning January 1, 2025, represents the Applicant’s view of its expected financial performance and the outlook Trans Mountain relies on for planning purposes.²⁴ Throughout this Report, CER 4.1b.1 is also referred to as Trans Mountain’s Base Case. The relatively high level of uncommitted capacity utilization underlying this outlook results in Trans Mountain’s Base Case as being its ‘Best-Case’ scenario.
67. This report assesses Trans Mountain’s Base Case against the Fair Return Standard. If Trans Mountain cannot meet the Fair Return Standard under its preferred, best-case outlook, there is no scenario it has submitted under which the Fair Return Standard can be met.
68. Trans Mountain’s Base Case shows that Trans Mountain’s rate of return:
- i) is not comparable to enterprises of like risk;
 - ii) does not maintain its financial integrity; and
 - iii) cannot attract capital on reasonable terms and conditions.

²² Trans Mountain Response to CER IR No.4.1(b), [A9C4T3](#), July 10, 2024, PDF pp. 2-3.

²³ Unlevered cash flow is the cash flow available to all debt and equity holders after operating expenses, sustaining capital, working capital investments and cash taxes have been paid (line items 38 – 42 in the Quantitative Financial Outlooks). Levered cash flow is the unlevered cash available to equity holders after debt service, including interest and debt principal repayment, have been met (line items 38 – 45).

²⁴ Trans Mountain Response to CER IR No. 2.14 (b), [A8W4V8](#), February 26, 2024, PDF p. 51.

69. Two widely used discounted cash flow analytical approaches have been conducted to reach these conclusions—Net Present Value (NPV) and Internal Rate of Return (IRR). These analyses show that the tolls do not meet the Fair Return Standard.

3.4 Trans Mountain's Net Present Value is negative

70. Trans Mountain's Base Case Net Present Value (NPV) results in a net loss of \$18 billion at a discount rate of 11%. This loss represents the revenue shortfall delivered by the Tolling Methodology in present value, or current value, terms.

71. Under a more likely scenario of lower than 96% capacity utilization such as that represented by CER 4.1b.3, Trans Mountain's Net Present Value results in a net loss is \$20.3 billion.

72. For Trans Mountain to meet the Fair Return Standard, a shortfall of approximately \$18 - \$20 billion, in current value, would need to be recovered through tolls. The nominal amount would depend on the timing of the recovery.

73. NPV is a discounted cash flow method used to calculate the value of an investment by comparing it to a stream of expected future payments. NPV considers the time value of money—the fact that a dollar today is worth more than a dollar twenty years from now.

74. NPV measures the present value of the initial capital outlay against the present value of all expected cash inflows arising from the investment by subjecting the cash flows to a discount rate each year. NPV is a measure of profitability or loss as viewed from the perspective of evaluating an investment today rather than over a period. A positive NPV represents a net profit while a negative NPV represents a net loss.

75. NPV incorporates risk that has not, or pragmatically cannot, be reflected in financial outlooks. This is done by applying a discount rate. Discount rate is another term for rate of return. The higher the perceived risk of an investment or business entity, the greater the rate of return required to protect against that risk, and therefore the higher the discount rate.

76. It also follows that the higher the discount rate, the lower the Net Present Value of a series of discounted cash flows. That is, the NPV of Trans Mountain's Base Case at both 8% and 11% results in a net loss, but the loss at an 11% discount rate is higher than the loss at 8%.

77. Internal Rate of Return (IRR) is a discounted cash flow technique that is closely related to NPV. IRR represents the discount rate or rate of return that results in a Net Present Value of zero—where the present value of the cash outlays are equal to the present value of the cash inflows. IRR allows decision makers to select a rate of return that must be exceeded by the project for it to cover costs and deliver a fair return. Section 3.5 below provides an IRR discussion and analysis for Trans Mountain.

78. Trans Mountain has relied on NPV and IRR analyses for more than a decade to inform itself of the viability and likely profitability of the pipeline expansion under its Tolling Methodology.
79. As confirmed during RH-001-2012, “Trans Mountain utilizes a discounted cash flow (“DCF”) analysis to evaluate its investment returns”²⁵ and defined its reliance on DCF as a consideration of both cash inflows and outflows, “or solves for the “internal rate of return” or “IRR” that exactly balances cash inflows and outflows in present value terms.”²⁶
80. Trans Mountain and its expert, Mr. John Reed, detailed the benefits of both NPV and IRR analysis during RH-001-2012.²⁷
81. Trans Mountain contracted TD Securities to undertake an NPV discounted cash flow in 2018.²⁸ Trans Mountain Executive and Board regularly rely on NPV and IRR discounted cash flow analysis.²⁹ “A discounted cash flow analysis incorporates a present value calculation and the concept of the time value of money and can be described as an NPV analysis...A discounted cash flow technique is the typical approach used by Trans Mountain to evaluate investment returns for significant capital investments...”³⁰
82. Trans Mountain has not submitted a NPV or IRR analysis in this hearing.
83. CER IR No. 4.1(c) asked Trans Mountain to provide a discounted cash flow analysis. “Provide an analysis of cash flows and equity return ... discounted to account for the time-value of money. Include an explanation of the discount rate used.”³¹ Although Trans Mountain consistently assesses the expansion’s profitability using NPV or IRR, neither of these methods were used to respond to the Commission’s request.
84. Trans Mountain provided a response to the CER with present value figures calculated for each of the 20 years in its Quantitative Financial Outlooks 4.1-2 but failed to complete two additional steps needed to arrive at a meaningful NPV discounted cash flow calculation. Trans Mountain needed to aggregate the annual present value of cash inflows and then compare these to the present value of the capital outflows.

²⁵ Trans Mountain Pipeline ULC, Reply Evidence of John J. Reed, January 31, 2013, [A3F1C6](#), p. 7, PDF p. 9.

²⁶ *Ibid*, p. 8, PDF p. 10.

²⁷ *Ibid*, [A3F1C6](#), pp. 6-10, PDF pp. 8-12, and Trans Mountain Pipeline ULC, Written Reply Evidence, RH-001-2012, January 31, 2013, [A3F1C5](#), pp. 2-9, PDF pp. 4-11.

²⁸ Kinder Morgan Canada Ltd., [Fairness Opinion](#), Appendix B, July 27, 2018, pp. 25-29, PDF pp. 36-40.

²⁹ Access to Information and Privacy, ATIA.01.0004.2019, p.58. “The incremental cash flow forecast is used to calculate an unlevered IRR for the project.” And Trans Mountain Expansion Project, Executive Report, May 21, 2021, PS_CPM_1.09a_00021, [A9E6E9](#), PDF p. 32. It is of note that an IRR calculation cannot be conducted without an initial outlay.

³⁰ Trans Mountain, Response to Tsleil-Waututh Nation Information Request No. 2 to Trans Mountain, No 2.3 (k) (I), [A9D7X6](#), PDF p. 22.

³¹ Trans Mountain, Response to CER Information Request No. 4, July 18, 2024, [A9C4T3](#), 4.1(c) PDF p. 3.

85. TWN asked Trans Mountain to aggregate the annual present value of the cash inflows. Trans Mountain provided the aggregation in ‘Table 2.3-2 PV Cash Flow’.³²
86. TWN asked Trans Mountain to conduct a Net Present Value discounted cash flow analysis based on its Quantitative Financial Outlooks—the Base Case and the two additional scenarios requested by the Commission. Trans Mountain responded that a “present value calculation excluding debt service (unlevered) and including debt service (levered) is provided in the Updated Quantitative Financial Outlooks in CER 4.1 at line 52/60 and line 53/61, respectively.”³³
87. Trans Mountain directed TWN to annual Present Value calculations, not a Net Present Value discounted cash flow analysis as requested. Based on evidence filed during RH-001-2012 and analyses the company has commissioned from TD Bank, Trans Mountain recognizes that a Net Present Value analysis requires consideration of investment returns measured against an investment yet pointed to a series of figures that ignore the capital outlay. Trans Mountain presents a stream of discounted benefits with no consideration of the cost incurred to achieve these forecasted benefits. Trans Mountain did not conduct the ‘Net’ in the Net Present Value calculation.
88. Trans Mountain did provide the present value calculations for the cash flows at a discount rate of 11% for each of the 20 years in its response to CER No. 4.1(c) and aggregated these annual figures in its response to TWN No.2.3(m). I have performed the next two steps by estimating the present value of the capital outlays and then netted these off against Trans Mountain’s estimated present value of the cash inflows in its Base Case and 4.1b.3 to arrive at an NPV.
89. The analysis adopts Trans Mountain’s selected rate of return at 11% which Trans Mountain identified as a low estimate for a market determined return.³⁴
90. Trans Mountain chose its rates “based on recent market data from a comparable company proxy group of 11% based on current Discounted Cash Flow (DCF) and Capital Asset Pricing Model (CAPM) cost of equity analyses.”³⁵ Trans Mountain concluded that a rate of return of 11% would be at the “low-end estimate of the market cost of equity for Trans Mountain.”³⁶

³² Trans Mountain, Response to Tsleil-Waututh Nation Information Request No. 2 to Trans Mountain, No 2.3 (dd), [A9D7X6](#), PDF p. 25.

³³ *Ibid*, No. 2.3(m), PDF p. 22.

³⁴ Trans Mountain relied on a discount rate of 12% - 15% during RH-001-2012 which was considered typical of an industry required return. However, rather than use a 12% - 15% range, Trans Mountain’s 11% is adopted since Trans Mountain accepts the figures it has produced using this discount rate. The findings in this report are accordingly conservative since the higher the discount rate, the lower the net present value.

³⁵ Trans Mountain, CER Information Request No. 4.1(f) to Trans Mountain, [A9C4T3](#), July 10, 2024, PDF p. 5.

³⁶ *Ibid*.

91. As explained above, the missing piece from Trans Mountain’s Base Case is a present value estimate for the capital invested—the cost to buy and build the expansion.³⁷ Trans Mountain Corporation’s (TMC) financial statements from 2018 - Q1 2024 provide this information. TMC’s financial statements also provide the cash flow from operating the legacy pipeline over this period. Applying the discount rate to these annual figures brings them to the present. The present value of Trans Mountain’s investment—the cost of the outlay—is \$39.2 billion.³⁸
92. The 20-year time horizon for cost recovery in Trans Mountain’s Financial Outlooks is consistent with the time horizon Trans Mountain relied on during RH-001-2012 to recover costs. “The Fixed Toll Component and the Variable Toll Component are intended to allow for the recovery of all project costs over the duration of the contract period.”³⁹
93. A Net Present Value analysis applied to Trans Mountain’s Base Case scenario results in a negative value—a net loss—of \$18 billion.⁴⁰
94. A NPV analysis applied to the slower uptake of spot capacity utilization in 4.1b.3 results in a negative value—a net loss—of \$20.3 billion.⁴¹

Table 1: Net Present Value Trans Mountain’s Quantitative Financial Outlooks
As of May 1, 2024

	Discount Rate	PV Cash Flow Excluding Debt Service (\$billions)	PV of Capital Invested (\$billions)	Net Present Value (\$billions)
Base Case CER 4.1b.1	11.0%	\$21.1	-\$39.2	-\$18.0
CER 4.1b.3	11.0%	\$18.9	-\$39.2	-\$20.3

Source: Trans Mountain Attachment Quantitative Financial Outlooks 4.1-2, Response TWN Table 2.3-2 PV Cash Flow, TMC Annual Report 2018-2023, TMC Q12024 Financial Report. Errors due to rounding.

95. NPV discounted cash flow analysis indicates that when the current value of cash outlays is compared to the current value of anticipated future cash inflows, Trans Mountain cannot meet the comparable investment criteria of the Fair Return Standard because it suffers significant net present value losses.
96. Significant NPV losses represent a lack of financial integrity over the life of the contracts.
97. When NPV for a project is significantly negative it compromises its ability to attract capital under reasonable terms or conditions.

³⁷ The rate base was not chosen to reflect the cash outflow since, although it reflects asset value from a cost-of-service methodology, it does not provide an accurate representation of the opportunity cost of the capital invested in the system. AFUDC is also included in rate base further distorting the cash flow invested.

³⁸ See Technical Appendix 3.1.

³⁹ Trans Mountain, Updated Responses to Suncor Energy Marketing Inc and Suncor Energy Product Partnership, Information Request No.1, January 10, 2013, 1.47 (a), [A3E7F6](#), PDF p.88.

⁴⁰ See Technical Appendix 3.1.

⁴¹ See Technical Appendix 3.1.

98. Under a Net Present Value assessment, Trans Mountain is not profitable, and the magnitude of the losses are significant. A recovery of \$18 to \$20 billion, in current dollars, over the term of the contracts is necessary for Trans Mountain to meet the Fair Return Standard.

3.5 Trans Mountain's unlevered IRR is well below market standards

99. An internal rate of return (IRR) is often referred to as a hurdle rate. This is because the IRR selected is a required rate of return, or the hurdle rate the return of the project needs to clear. The hurdle rate is selected to provide enough financial room—to provide a cushion—against perceived risks. This cushion against perceived risks is what allows a company to believe it has a reasonable opportunity to earn a fair return.

100. Alternatively, accommodation for risk exposure can be built into forecasts by assessing a range of potential outcomes and calculating their probabilities.

101. Trans Mountain relies on a target IRR to arrive at a measure of fair return that indirectly incorporates the risks it is exposed to rather than preparing numerous forecasts that acknowledge risk by assessing a range of potential outcomes and their probabilities.

102. Trans Mountain explained in its Written Evidence during RH-001-2012 why Trans Mountain prefers to capture its risk exposure through an IRR rather than a probabilistic risk assessment. “Assessment of individual risk components would require a comprehensive statistical analysis of the risk variability with each component over a 20 year period... While a comprehensive probabilistic risk assessment exercise is theoretically possible, it would have limited practical effect... Trans Mountain's approach to assessing potential new pipeline investment is one that applies a more pragmatic use of a hurdle rate.”⁴²

103. Trans Mountain's hurdle rate for Trans Mountain's expansion was in the range of a 12 – 15% unlevered IRR.⁴³

104. The CER recognized Trans Mountain's required return as reasonable. “Trans Mountain stated that it made an investment decision based on a return on investment that was acceptable, taking into account the cash flow generated by the negotiated tolls that were agreed to by Trans Mountain and Firm Service Shippers. The investment decision criteria included a targeted unlevered internal rate of return in the typical range of 12 percent (12%) to 15 percent (15%).”⁴⁴

105. Trans Mountain explained its hurdle rate needed to be cleared over the life of the contracts, not the life of the project, because of the asymmetric risks Trans Mountain faced. “The process we undertook... would have been to having established what the investment requirements would be for a project of this sort and having full knowledge of what the hurdle rate is that we have to accomplish, is then go through some really internal proprietary

⁴² *Supra* n.27, [A3F1C5](#), pp. 4-5, PDF pp. 6-7.

⁴³ Unlevered refers to measuring cash flow available to the entity before debt obligations.

⁴⁴ *Supra* n.1, [A51913-1](#), p. 23. PDF p. 35.

consideration of pro formas and scenarios that give some comfort that a projected IRR -- unlevered IRR of 12 percent, you know, could be achieved. And the investment decision was made based upon that and the decision was made to support the project on the basis that we had a probability of achieving that unlevered IRR hurdle through the period of the 20 years of the investment.”⁴⁵

106. Since Trans Mountain’s NPV is negative at 11% it follows that the IRR of the project must be lower than 11%. This is because IRR is the discount rate that brings NPV to zero.

107. Undertaking an unlevered IRR calculation on Trans Mountain’s cash flows as provided in its Quantitative Financial Outlooks and TMC’s financial statements generates a 3.77% return under Trans Mountain’s Base Case scenario (4.1b.1) and 2.87% under the staged spot capacity utilization scenario (4.1b.3).⁴⁶

108. Trans Mountain’s Quantitative Financial Outlooks and Financial Statements show that the tolls do not generate sufficient revenue to deliver a market rate of return as measured by IRR discounted cash flow analysis. Instead of the 12 to 15% range Trans Mountain required and the CER considered typical, the range has fallen to an IRR of 3 to 4 %.

3.6 Trans Mountain lacks financial integrity within the meaning of the Fair Return Standard

109. Under the Fair Return Standard, the Financial Integrity Requirement is satisfied when a pipeline operator earns a return that enables the regulated entity to maintain its financial viability. Financial integrity is defined as the ability to meet financial obligations, generate a profit, and recover invested capital.

110. As the significant NPV losses and below industry standard IRRs indicate, Trans Mountain’s financial integrity is not maintained and therefore the Fair Return Standard is not met.

111. There are additional factors that need to be considered in assessing Trans Mountain’s lack of financial integrity. Trans Mountain:

- i) cannot meet all its financial obligations; and
- ii) has not appropriately considered or planned for the financial demands of a myriad of business risks it is exposed to.

3.6.1 Trans Mountain cannot meet its debt obligations

112. Trans Mountain’s debt obligations are less onerous than those that would exist for a private company faced with Trans Mountain’s risk profile.

⁴⁵ Trans Mountain Pipeline ULC, Part IV Application, Transcripts Volume 2, February 13, 2013, [A3F4W5](#), paragraphs 1894 -1895, PDF p. 44.

⁴⁶ See Technical Appendix 3.2.

113. Even though Trans Mountain faces obligations that are lower than those which would exist for a commercial enterprise disciplined by market forces, the tolls delivered by Trans Mountain's Tolling Methodology do not allow Trans Mountain to meet its debt obligations.
114. As of June 30, 2024, Trans Mountain had \$17.8 billion in debt drawn on a \$19 billion revolving credit facility with a syndicate of commercial banks—the Syndicated Loan. This loan matures August 31, 2026.⁴⁷ The Syndicated Loan is identified in Trans Mountain's Quantitative Financial Outlooks as 'Credit Facility'.
115. The Syndicated Loan is guaranteed 100% by the Government of Canada. The need for a government guarantee on the Syndicated Loan reflects the degree to which private sector lenders deem Trans Mountain's risk profile—its ability to repay the debt from project returns—as high. Absent a government guarantee, and under the Tolling Methodology and Trans Mountain's current capitalization, it is unlikely Trans Mountain could secure third-party financing. If it were successful, the terms and conditions would be more stringent. For example, the interest rate would be higher to reflect Trans Mountain's risk.
116. As of June 30, 2024, Trans Mountain had an \$8.5 billion loan with TMC's parent, TMP Finance, which in turn owes this debt to the Government of Canada through the Canada Account. Trans Mountain's TMP Finance debt matures August 29, 2027.⁴⁸ Based on existing terms, the interest on the loan is treated as interest in kind and added to the loan balance.⁴⁹ Since April 28, 2022, when interest in kind was approved, Trans Mountain has been increasing its TMP Finance debt to meet its interest obligations.
117. A lender supporting a company's financial challenges by agreeing to interest in kind in lieu of cash payment would typically increase the rate of interest on its loan to reflect repayment risk and the deferral of cash. When the Government of Canada gave Trans Mountain the ability to forego the burden of cash interest expense on its TMP Finance Loans, instead of raising the interest rate, it retained it at 5%. This decision was made during a time of increasing short-term interest rates, which on a commercial basis should have provided a compelling reason for the interest rate to increase.⁵⁰

⁴⁷ Trans Mountain Corporation, Q2 2024, [Quarterly Financial Statement](#), PDF p. 11.

Syndicated Credit Agreement: Equator Principles 4 compliant agreement with a syndicate of banks dated April 29, 2022, increased to \$19 billion and extended to August 31, 2026, on May 17, 2024. Government of Canada guarantee through the Canada Account facilitating the loan and interest rate below market given TMC's risk profile.

⁴⁸ *Ibid.* TMP Finance Loans: dated August 29, 2018, amended most recently on June 27, 2024, to extend maturity two years to August 29, 2027. Interest incurred is paid in kind and added to the principal of the Construction Facility semi-annually.

⁴⁹ Trans Mountain Corporation, Q2 2022, [Quarterly Financial Statements](#), p. 12. "On April 28, 2022, amendments were made whereby unpaid interest and commitment fees incurred under the Credit Agreement are to be added to the principal amount of the credit facility debt semiannually."

⁵⁰ Trans Mountain "assumed, for the purpose of preparing the Quantitative Financial Outlooks, that the Syndicated Credit Facility would continue over the forecast period at an interest rate of 6.5%." Trans Mountain Pipeline ULC Response to Tsleil-Waututh Nation Information Request No. 2.2 (m), [A9D7X6](#), p. 14. This is 1.5% more than the

118. Trans Mountain’s TMP Finance Loans will reach \$9.9 billion by the time they mature August 29, 2027, because Trans Mountain has been borrowing to service these debt obligations since April 28, 2022⁵¹ and Trans Mountain plans to continue to do so until at least August 2027. Trans Mountain identifies its government funded debt in its Quantitative Financial Outlooks as the ‘TMP Finance Loans’ since it is made up of an Acquisition Facility and a Construction facility.
119. Trans Mountain’s Quantitative Financial Outlooks indicate that instead of allocating cash flow from toll revenue to pay interest expense on the TMP Finance Loans, Trans Mountain is using the cash flow benefit from this special accommodation of interest in kind to help pay down the debt it owes on the Syndicated Loan. That is, for at least the first three years of the expansion’s operation, Trans Mountain intends to increase the debt obligation it has with the Government of Canada so it can support principal repayment on the debt it owes to Canadian banks.⁵²
120. Government guarantees on third-party debt, government lending at below market rates and under preferred terms and borrowing from the government at lower than market rates to service private sector debt obligations, indicate a lack of financial integrity and resiliency within the meaning of the Fair Return Standard.

Table 2: Trans Mountain’s Debt Obligations at TMC

(\$millions)
June 30, 2024

Facility	Amount Outstanding	Interest Rate	Maturity Date
Acquisition	2,506	5%	August 29, 2027
Construction	5,949	5%	August 29, 2027
Total Government of Canada	8,455	5%	
Syndicated Credit	17,765	Variable ⁵³	August 31, 2026
Total	26,220		

Source: Trans Mountain Corporation (TMC) Financial Statements, June 30, 2024.⁵⁴

121. Trans Mountain’s Quantitative Financial Outlooks 4.1b.1 – 4.1b.3 and TWN Motion Update 2.3t confirm tolls delivered by the Tolling Methodology are not high enough for Trans Mountain to repay its debt obligations even under preferential terms and conditions.

rate on Trans Mountain’s loans with TMP Finance providing further evidence that the rate is below the risk-free market rate.

⁵¹ *Supra* n.49, Q2 2022, [Quarterly Financial Statements](#), p. 12.

⁵² *Supra* n.21, [A9F3D8](#).

⁵³ Trans Mountain Corporation, [Quarterly Financial Report](#), June 30, 2024, PDF p.11.

Borrowings under the Syndicated Facility bear interest at the Canadian Prime Rate or Canadian Overnight Repo Rate Average (“CORRA”) plus applicable margins and commitment fees. The effective interest rate for the three and six month periods ended June 30, 2024 was 6.5% and 6.6%, respectively. The effective interest rate for the three- and six-month periods ended June 30, 2023 was 6.2% and 5.7%, respectively.

⁵⁴ *Ibid*.

122. As Table 2 indicates, the Syndicated Loan matures August 31, 2026, and the TMP Financial Loans mature August 29, 2027. Revenue from tolls delivered by the Tolling Methodology cannot repay the debt obligations when they become due, and refinancing arrangements will be required, or Trans Mountain will no longer be able to operate as a going concern.⁵⁵
123. In its Quantitative Financial Outlooks Trans Mountain assumes these financial obligations are continuously rolled over on existing terms and conditions and Trans Mountain receives ongoing government support throughout the life of the contracts.⁵⁶
124. Although Trans Mountain intends to pay cash interest on the \$9.9 billion TMP Finance Loans beginning in September 2027, Trans Mountain does not plan to repay any of the principal over the life of the contracts – Trans Mountain’s most recent Quantitative Financial Outlooks assume TMP Finance will be owed \$9.9 billion throughout the period 2027 to 2044.
125. Trans Mountain’s debt repayment from toll revenue is allocated toward reducing the principal balance on the Syndicated Loan, however even this loan is not expected to be repaid over the life of the contracts.⁵⁷
126. Trans Mountain has not adequately addressed the challenges it faces from the short-term nature of its debt facilities, the magnitude of its debt, its reliance on an increase in government funded debt to assist in reducing the Syndicated Loan obligation for the first three years of operation, and its ongoing need for subsidized terms and conditions.
127. Trans Mountain has submitted five rounds of financial outlooks during this proceeding with each round intended to replace the prior one. All financial outlooks, however, have indicated Trans Mountain cannot meet its debt obligations.
128. In CER IR No.1.4 (d) the Commission asked Trans Mountain to Confirm whether tolls as proposed in Trans Mountain’s Application ““could cause Trans Mountain to be unable to meet its financial obligations.” If they could cause this, explain in detail, and discuss how this should factor into the Commission’s decision on the Application.”⁵⁸
129. In response to CER IR No.1.4 (d), Trans Mountain appealed to the requirements of the Fair Return Standard and defined its financial obligations “as the ability for the revenue

⁵⁵ Trans Mountain Corporation, [2023 Annual Report](#), Note 2, Going Concern, p. 11, PDF p.12.

⁵⁶ *Supra* n.21, [A9F3D8](#), Lines 30.1.1 – 30, PDF pp. 2-3.

Disaggregated debt obligations show Trans Mountain continues to add interest in kind to its TMP Finance Loans until August 2027 when the obligation reaches \$9,905 million and does not expect to repay any of the outstanding principal on the TMP Finance obligation for the life of the contracts. With respect to the Syndicated Loan, Trans Mountain has determined its debt repayment schedule with \$1,260 million principal on the Syndicated Loan outstanding after the contracts expire in 2044.

⁵⁷ *Ibid.*

⁵⁸ Trans Mountain, CER Information Request No. 1.4(d) to Trans Mountain, [A8S1R3](#), August 16, 2023, p. 18.

generated from tolls to pay Trans Mountain’s operating expenses, capital projects, **service debt (interest and principal)**, and a reasonable return to equity holders.”⁵⁹ (Emphasis added.)

130. Trans Mountain included a table titled ‘Table 1.4-3 Trans Mountain Financial Ratios Table’⁶⁰ which provided three years of performance from 2024 – 2026 under two scenarios: a scenario with its capital structure at that time of 72% debt to 28% equity and a scenario with recapitalization to achieve a capital structure of 55% debt to 45% equity. Neither of these scenarios indicated that Trans Mountain could service the principal on its debt when due through the tolls or provide a reasonable return to equity holders.

131. In contrast to the financial figures included in Table 1.4-3 that indicated Trans Mountain could not service its debt or provide a reasonable return to equity holders, Trans Mountain stated in its response that “Trans Mountain expects to meet its financial obligations in the years of operations illustrated, (2024 - 2026) and would expect that to continue to be the case over the entire contract term... Debt repayment is an important consideration in the scenarios. Before debt repayment is provided in the scenarios...payables will need to be addressed during the first year of operations and existing debt will be repaid over 25 years in equal installments beginning in 2025.”⁶¹

132. Trans Mountain did not explicitly address the repayment obligations on its debt, which at that time were due to mature on March 24, 2025, for the Syndicated Loan and August 29, 2025, for the TMP Finance Loans.⁶² Rather Trans Mountain treated its short-term debt as if it were long-term debt with repayment terms of equal installments over a 25-year time horizon. Trans Mountain assumed maturity dates would be extended as needed even after the shipper contracts expire, under the same terms and conditions that currently exist. This assumption was applied to its existing capitalization and recapitalization scenario.

133. In CER IR No. 2.1(a), the Commission requested “an updated quantitative financial outlook for each year during the life of the Firm Service contracts based on Trans Mountain’s current: TMEP cost estimate, expected Commencement Date, and financial position. Include all relevant assumptions in the response. The updated financial outlook should include a discussion on:

a.1) The recapitalization of Trans Mountain’s debt and equity structure and the ongoing reasonableness of the assumption that recapitalization will occur in 2024. Provide Trans Mountain’s expected debt levels as of 31 December 2024.

a.2) Trans Mountain’s financial obligations.

⁵⁹ *Ibid*, 1.4 (d) Response, p. 20.

⁶⁰ *Ibid*, p. 23.

⁶¹ Trans Mountain Pipeline ULC Response to Tsleil-Waututh Nation Information Request No. 2.1 (t), [A9D7X6](#), PDF p. 9. “The debt repayment at line 44 (in Quantitative Financial Outlooks 4.1-2) of \$623 million is the net of \$1,068 million debt repayment on the Syndicated Credit Facility and the addition of \$445 million of paid in kind interest to the TMP Finance loan balance.”

⁶² Trans Mountain Corporation, Q2 2023, [Quarterly Financial Statements](#), PDF pp. 11-12.

a.3) Trans Mountain’s ability to meet its financial obligations under the applied for Commencement Date tolls throughout the forecast period.

a.4) Any significant risks that could impact Trans Mountain’s ability to meet its financial obligations, both in the first three (3) years after the Commencement Date and over the life of the Firm Service contracts.”⁶³

134. Trans Mountain replaced the Financial Ratio Table from CER IR No. 1 with Quantitative Financial Outlooks, Attachment 2.1(a) – (c).⁶⁴ Trans Mountain removed any recapitalization strategy from consideration stating, “(T)he financial outlook has been provided prior to any recapitalization taking place. A recapitalization of Trans Mountain is under consideration, however, the borrowing authorities necessary to undertake a recapitalization have not yet been received.”⁶⁵

135. Trans Mountain was asked by the Commission in 2.1a.4 to discuss “Any significant risks that could impact Trans Mountain’s ability to meet its financial obligations, ... in the first three (3) years after the Commencement Date...”⁶⁶

136. Trans Mountain’s forecast debt obligations for year-end 2024 had risen from \$21.4 billion in its first set of outlook statements submitted August 16, 2023, to \$27.2 billion in its second set provided six months later, on February 26, 2024.⁶⁷ The maturity date for the TMP Finance Loans at this time was August 29, 2025, while the Syndicated Loan maturity date was March 24, 2025. More than \$27 billion in debt obligations coming due within two years, with no indication of how they might be met would typically be considered a significant risk, but Trans Mountain did not address this in their response.

137. The reference Trans Mountain made to the risk of its debt obligations was vague and downplayed. “Significant risks that could impact Trans Mountain’s ability to meet its financial obligations over the life of the Firm Service contracts include...Recapitalization does not occur in a timely manner...Interest rates vary unfavourably from current rates... Individually, these risks have a low probability of impacting Trans Mountain’s ability to meet its financial obligations over the life of the Firm Service contracts. However, if a combination of these low probability risks materialize during the 20-year Firm Service contract term, the compounding effect could impact Trans Mountain’s ability to meet its financial obligations despite the fixed escalation of the toll for the 15- and 20-year terms of the Firm Service contracts.”⁶⁸

⁶³ Trans Mountain, CER Information Request No. 2.1 (a), [A8W4V8](#), PDF p. 2.

⁶⁴ Trans Mountain, CER Information Request No. 2.1, Attachment 2.1 (a), Quantitative Financial Outlooks, [A8W4V9](#), PDF pp. 2-6.

⁶⁵ Trans Mountain, CER Information Request No. 2.1 (a), [A8W4V8](#), PDF p. 3

⁶⁶ *Ibid*, PDF p. 2.

⁶⁷ Table 2 above indicates that as of June 30, 2024, debt obligations were \$26.2 billion. With interest in kind added to the TMP Finance loan balance and expected draws on the Syndicated Loans, Trans Mountain’s Financial Outlooks reflect anticipated year end debt load. In IR No. 2 Trans Mountain indicated it would be \$27.2 billion.

⁶⁸ Trans Mountain, Response to CER Information Request No. 2.1 (a.4), [A8W4V8](#), PDF p. 4.

138. In CER IR No. 3.1 (a), the Commission requested corrections and/or clarifications on Trans Mountain's Financial Outlooks. Trans Mountain revised its Financial Outlooks and resubmitted them in as Attachment CER - 3.1(a) - Updated Quantitative Financial Outlooks on April 9, 2024.⁶⁹
139. Trans Mountain did not address its debt repayment obligations in response to CER IR No.3.1(a) either. Trans Mountain's Quantitative Financial Outlooks continued to reflect the assumption that for 20 years credit would continue to be extended by the Government of Canada and Canadian banks under special accommodations.
140. In CER IR No. 41(b) Trans Mountain was asked to update its Quantitative Financial Outlooks to reflect current as-built costs and interim tolls that reflect that cost. Trans Mountain responded with Attachment 4.1-2 Quantitative Financial Outlooks.⁷⁰
141. Trans Mountain did not discuss its debt repayment obligation in its updated outlooks but continued to assume, without any evidence I am aware of, that its government supported capital structure would continue for the life of the contracts.
142. Even if Trans Mountain's assumption that a subsidization of its capital structure continues over the life of the contracts is accepted, Trans Mountain's existing debt profile should not be ignored. Trans Mountain's lack of financial integrity is being accommodated by non-market terms and conditions.
143. Trans Mountain's response to CER IR No. 4.1-2 Quantitative Financial Outlooks provides a scenario where recapitalization takes place January 1, 2025. Trans Mountain did not indicate where it planned to obtain this significant injection of equity or how its existing loan arrangements might change. This demonstrates to me that the recapitalization scenario is not reliable. Recapitalization of Trans Mountain did not occur effective January 1, 2025.
144. Even if Trans Mountain's recapitalization scenario was reliable Trans Mountain would still fall short of meeting the Fair Return Standard.
145. Trans Mountain was asked in TWN IR No.2.1(c) to provide a disaggregation of the TMP Finance Loans and Syndicated Loan identified in its 4.1-2 Quantitative Financial Outlooks. As well, Trans Mountain was asked in TWN IR No. 2.1(e) if it anticipated an increase in its debt load beyond what it had indicated in its 4.1-2 Quantitative Financial Outlooks.⁷¹

⁶⁹ Trans Mountain, CER Information Request No. 3.1 (a) to Trans Mountain, [A8X5E3](#), April 9, 2024, PDF p. 2 and Attachment Response [A8X5E4](#), PDF pp. 2-5.

⁷⁰ Trans Mountain, CER Information Request No. 4.1 (b) to Trans Mountain, [A9C4T3](#), July 10, 2024, PDF p. 2 and Attachment Response [A9C4T4](#).

⁷¹ Trans Mountain, Supplemental Response to Tsleil-Waututh Nation Information Request No. 2, [A9F3D7](#), p. 3, PDF p. 3.

146. On June 27, 2024, the maturity date for the TMP Finance Loans was extended by two years from August 29, 2025, to August 29, 2027, allowing Trans Mountain to continue to charge interest on the TMP Finance Loans as interest in kind.⁷²
147. Trans Mountain’s response to TWN’s request 2.1(c) and 2.1(e) incorporated the terms of the extension. “Please refer to Supp-Attachment 2.3 t, which provides revisions to CER 4.1b.1 and CER 4.1b.3 to reflect paid-in-kind interest for 2026 and 2027. These revisions are shown in blue text at lines 30.1.1, 30.1.2, 30.1 and 30.2 in each Supp-Attachment CER 4.1b.1 and CER 4.1b.3.”⁷³ The revisions show that Trans Mountain’s debt obligation to TMP Finance will continue to increase until at least 2027 because Trans Mountain will continue to add interest in kind to the outstanding principal.
148. The TWN IR 2.1 response revisions to CER 4.1b.1 and CER 4.1b.3 show that at loan maturity in August 2027, Trans Mountain will owe TMP Finance \$9.9 billion. Subsequently, the TMP Finance Loans are assumed to roll over and Trans Mountain plans to pay interest owed in cash but does not plan to repay any of the principal over the life of the contracts.
149. Once shipper contracts expire, it is not clear when, how or if the \$9.9 billion debt Trans Mountain will have owed to TMP Finance, for almost two decades, will be repaid. What is clear is that the tolls provided by the Tolling Methodology will not be allocated to meet Trans Mountain’s TMP Finance Loans obligation.⁷⁴
150. At year end 2024, Trans Mountain indicates in its 4.1-2 Quantitative Financial Outlooks its equity will be \$7,858 million calculated as net rate base minus debt. This equity is made possible through the debt Trans Mountain Corporation’s parent, TMP Finance, incurred on behalf of Trans Mountain.⁷⁵
151. TMP Finance, Trans Mountain Corporation’s parent, borrowed from the Canada Account to finance Trans Mountain’s purchase and expansion. The Canada Account receives its funds from the Consolidated Revenue Fund which is primarily financed by taxpayers.
152. TMP Finance took the debt it incurred and advanced part of it as debt and part of it as equity to Trans Mountain Corporation at a ratio of 55 - 45. This equity injection lightened the burden of Trans Mountain’s financial obligations when viewed from the perspective of TMC because equity comes at no cost—there is no interest expense and no obligation to repay.
153. TMP Finance’s total debt obligation must be taken into account if Trans Mountain’s financial integrity is to be fully explored. The equity represented in Trans Mountain’s

⁷² *Supra* n.47, [Quarterly Financial Statements](#), p. 12, PDF p.13.

⁷³ *Supra* n.71., [A9F3D7](#), PDF p. 7.

⁷⁴ Trans Mountain has stated that it intends to pay down the debt with the highest interest rate first. Although on the face of it this would seem to make financial sense it ignores that the government funding is at subsidized rates and there is no stated or implicit intention to pay this debt down at all.

⁷⁵ The difference between the equity TMP Finance has advanced to TMC and the equity in Trans Mountain’s Quantitative Financial Outlooks is due to the way the equity on the Quantitative Financial Outlooks is calculated as rate base minus debt.

Quantitative Financial Outlooks was made possible through debt TMP Finance incurred from the Canada Account on Trans Mountain's behalf.

154. TMP Finance is charged interest at an annual rate of 4.7% on the debt it incurred to advance debt and equity to Trans Mountain Corporation at a ratio of 55 - 45. TMP Finance has no source of revenue to pay the interest expense charged on its loan with the Canada Account unless it receives revenue from TMC.
155. The terms of the financing arrangement TMP Finance has with the Canada Account means that TMP Finance has needed to borrow to fund part of its interest expense since entering into the loan agreement on August 29, 2018. "Given that TMP Finance borrows 100% of its financial requirements (at 4.7% interest) but only lends 55% of this to TMC (at 5.0% interest) it has an operating cash flow deficiency. To fund this deficiency, it will borrow to remain in a positive cash position."⁷⁶
156. Trans Mountain Corporation debt owed to TMP Finance at year end 2024 is \$8,668 million while TMP Finance debt owed to the Canada Account is \$17,696 million (inclusive of \$8,668 million TMC owes to TMP Finance).⁷⁷ The difference is primarily due to equity injections into Trans Mountain consisting of \$2,064 million as share capital and \$5,351 million as additional paid in capital for a total of equity advanced from TMP Finance of \$7,415 million.⁷⁸
157. The \$7,415 million of equity together with \$8,668 million in debt from TMP Finance means by year end 2024, Trans Mountain Corporation received \$16,083 million in government funding.
158. TMP Finance's debt load of \$17,696 million minus the funding it has provided directly to Trans Mountain Corporation of \$16,083 leaves a balance of \$1,613 million.⁷⁹ This \$1,613 million difference arises because TMP Finance has incurred interest expense on behalf of Trans Mountain without any ability to pay it. TMP Finance's only source of revenue is its subsidiary, Trans Mountain Corporation.
159. Trans Mountain Corporation paying interest in kind meant TMP Finance's operating cash flow deficiency would almost double. Therefore, TMP Finance's loan agreement with the Canada Account was amended to allow TMP Finance to also pay its interest expense as interest in kind and add it to its loan with the Canada Account.⁸⁰
160. To August 2027, interest in kind is added to the full amount of TMP Finance's obligations. After August 2027, Trans Mountain indicates it will pay interest on the TMP

⁷⁶ CDEV, [2019 - 2023 Corporate Plan Summary](#), PDF p. 10.

⁷⁷ *Supra* n.21, TWN Motion Update, [C32368-3](#), Line 30.1 for \$8,668 million. See Technical Appendix 3.3 for calculation of TMP Finance debt owed to the Canada Account of \$17,696 million.

⁷⁸ Trans Mountain Corporation, Q3 2024, [Quarterly Financial Statements](#), p. 6.

⁷⁹ TMP Finance Debt of \$17,696 – \$8,668 Trans Mountain Debt owed to TMP Finance - \$7,415 Equity injection into Trans Mountain = \$1,613.

⁸⁰ CDEV, Q2 2022, [Quarterly Financial Statements](#), p. 22, PDF p.24.

Finance Loans (\$495 million per year), but TMP Finance's debt obligation continues to increase from 2028 – 2044 because TMP Finance is obligated to pay 4.7% on its debt load and the cash it will receive from TMC fails to cover all this expense.

161. If TMP Finance does not receive additional cash distributions from Trans Mountain other than the cash interest payment on its TMP Finance Loans, in 20 years the debt TMP Finance owes to the Canada Account will be higher than the debt owed to the Canada Account today.
162. Debt owed to the Canada Account would grow from \$17.7 billion in 2024 to \$31.2 billion by 2044 if Trans Mountain only pays the interest expense on its \$9.9 billion obligation to TMP Finance.
163. Any commercially driven entity would be expected—at least once its project is operational—to have a reliable plan to ensure its parent is made whole. Trans Mountain has not done so.
164. TMP Finance owns shares in TMC.⁸¹ It is possible for TMC to declare dividends to TMP Finance once it begins to have cash available after debt service. However, TMP Finance debt obligations are certain while the cash flow available after debt service estimated by Trans Mountain in its Quantitative Financial Outlooks is uncertain and optimistic.
165. Table 3 below illustrates Trans Mountain's debt obligations on the Syndicated Loan and the TMP Finance Loans from 2024 – 2044 based on figures Trans Mountain provided in TWN response revisions to CER 4.1b.1.
166. In Table 3, the column titled TMP Finance Canada Account Loan Balance represents the total debt obligation incurred on Trans Mountain's behalf through TMP Finance loans with the Canada Account for year-end 2024. The amounts have been increased based on the terms of the credit agreement with the Canada Account as explained in CDEV's financial statements and incorporate the impact of TMC's interest expense being paid in cash beginning in September 2027.

⁸¹ In exchange for an equity injection of \$2.1 billion for Trans Mountain's purchase, TMC issued 2,064,150 common shares at \$1000 each. Trans Mountain Corporation, [Q3 2018 Financial Report](#), Note 16, p. 33.

Table 3: Trans Mountain Debt Obligations 2024 - 2044

(\$millions)

Year	Syndicated Loan	TMP Finance Loans	TMP Finance Canada Account Loan Balance
2024	18,711	8,668	17,696
2025	17,726	9,112	18,527
2026	16,278	9,579	19,398
2027	14,848	9,905	20,310
2028	13,605	9,905	20,769
2029	12,211	9,905	21,250
2030	10,663	9,905	21,753
2031	8,940	9,905	22,280
2032	7,205	9,905	22,832
2033	5,859	9,905	23,410
2034	5,439	9,905	24,015
2035	5,019	9,905	24,649
2036	4,599	9,905	25,312
2037	4,180	9,905	26,006
2038	3,761	9,905	26,734
2039	3,342	9,905	27,495
2040	2,925	9,905	28,292
2041	2,508	9,905	29,126
2042	2,092	9,905	30,000
2043	1,676	9,905	30,915
April 2044	1,260	9,905	31,234

Source: Trans Mountain’s response to TWN Motion Update, 4.1b.1 Lines 30.1 and 30.2, and CDEV Financial Statements. TMP Finance Canada Account Loan Balance calculation as per Technical Appendix 3.3.

3.6.2 Overly optimistic Financial Outlooks

167. Looking to Trans Mountain’s Base Case to inform the amount by which financial integrity is threatened is not prudent under the circumstances. While it shows Trans Mountain cannot meet the Fair Return Standard, it does not reveal by how much. In my opinion, the Base Case is overly optimistic and does not reflect the myriad of risks Trans Mountain faces.
168. Trans Mountain’s Base Case appears to be based on a belief that everything can and will go right—it is a best-case scenario.
169. Trans Mountain’s financial situation is significantly riskier than what Trans Mountain has submitted. There is less chance Trans Mountain will experience improved financial performance over the 20-year period than what it has presented, while there is a much greater chance Trans Mountain will experience financial performance that is worse than its Base Case.

170. Trans Mountain’s Base Case relies on the pipeline system operating at 96% capacity every year of operation between 2025 – 2044 while facing little internal or external challenge on the expense and capital side of its operations.
171. Trans Mountain’s chosen metrics of financial performance—‘20 Year Simple Average ROE’ and ‘Levelized ROE’—are misrepresentative of likely return. They do not account for the risks inherent in Trans Mountain’s Financial Outlooks. Section 3.9 below provides a more detailed discussion of these metrics.
172. Trans Mountain’s hurdle rate of a 12 – 15% unlevered IRR is as valid now as it was when Trans Mountain relied on it in RH-001-2012. Notwithstanding that capital cost risk has largely disappeared, Trans Mountain continues to face significant business risks, some of which it has identified and some it has not. These risks need to be considered in some way, either directly in the Financial Outlooks, or indirectly through the performance measures applied to them. Trans Mountain has done neither. These risks are considered further in section 3.8, below.

3.7 Capital Attraction Requirement of the Fair Return Standard not met

173. The Fair Return Standard requires that incremental capital be attracted to the enterprise on reasonable terms and conditions—the capital attraction requirement. Given that the Fair Return Standard also requires that an entity’s rate of return be comparable to enterprises of like risk, reasonable terms and conditions means commercial terms and conditions—the terms and conditions that a commercial entity subject to the constraints of the market would face.
174. Trans Mountain negotiated long term take or pay contracts with oil product shippers so it could attract capital to the project. “In order to financially underpin the project, we required long-term contracts.”⁸²
175. The usefulness of the long-term contracts as a market signal to securely attract capital began to disappear as Trans Mountain’s capital cost exceeded \$7.4 billion. The capped and uncapped feature in the contracts, and the untenable financial risk this represents, is why Trans Mountain is unable to attract capital on market terms today.
176. Trans Mountain is not financially viable because the revenue stream from oil product shippers is insufficient to meet all its obligations even under a best-case scenario. Therefore, government funding of a large portion of the debt and Government guarantee for the remainder is required.
177. A syndicate of Canadian banks have advanced about half of the required funds needed to expand Trans Mountain until at least August 2026, but only after being secured by an unconditional government loan guarantee. In contrast, Trans Mountain’s Base Case treats

⁸² Trans Mountain, Transcripts, [Volume 1](#), RH-001-2012, February 12, 2013, para. 344, PDF p. 35.

this short-term revolving line of credit as if it were a 20-year loan supported by government guarantee, not an eighteen-month loan.

178. Trans Mountain’s evidence shows that it cannot attract capital on reasonable terms and conditions. Its capital structure is heavily subsidized. Without the direct and indirect support of the Government of Canada through loan advances at less than market interest rates and taxpayer backed loan guarantees, Trans Mountain would not be able to operate and would cease as a going concern.

3.8 Risks to Trans Mountain’s Financial Outlooks

179. In CER IR No. 2, the Commission requested a discussion of “Any significant risks that could impact Trans Mountain’s ability to meet its financial obligations [...] over the life of the Firm Service contracts.”⁸³

180. Trans Mountain responded with a list of risks but did not incorporate a quantitative evaluation of these risks in its Financial Outlooks, nor adequately address them in its discussion.

181. The fact that Trans Mountain has not properly accommodated risk is one of the key reasons why Trans Mountain’s Quantitative Financial Outlooks suffer from optimism bias. Trans Mountain is aware of numerous risks to its forecasts, as demonstrated in the Written Reply Evidence submitted for RH-001-2012 (discussed further below) but does not present outlook scenarios that meet these risks over the 20-year period.

182. Trans Mountain’s financial plan, like its capital budget plan before it, plans for the best-case scenario, rather than incorporating the range of significant risks that it identified and other risks it should have.

183. Trans Mountain’s risk exposure response to the CER was short:

“Significant risks that could impact Trans Mountain’s ability to meet its financial obligations over the life of the Firm Service contracts include the following:

- Failure of Firm Service shippers that impacts their ability to meet their contract obligations.
- Uncommitted capacity utilization does not materialize.
- Unfavourable Final Toll determination or change in existing toll methodology.
- Pipeline operating costs or capital asset costs to maintain the pipeline in a safe and reliable operating condition are higher than anticipated.

⁸³ Trans Mountain, CER Information Request No. 2.1 (a.4), [A8W4V8](#), p. 2.

- Costs to obtain insurance and a line of credit to maintain financial resource requirements of \$1.1 billion to be available in the event of a spill are higher than anticipated.
- Salary, wages, and administration costs to appropriately resource the operation of the Expanded System are higher than anticipated.
- Property tax assessment methods and/or rates vary from what is anticipated.
- Recapitalization does not occur in a timely manner.
- Interest rates vary unfavourably from current rates.
- Income tax rates (federal or provincial) vary unfavourably from current rates.

Individually, these risks have a low probability of impacting Trans Mountain's ability to meet its financial obligations over the life of the Firm Service contracts. However, if a combination of these low probability risks materialize during the 20 year Firm Service contract term, the compounding effect could impact Trans Mountain's ability to meet its financial obligations despite the fixed escalation of the toll for the 15- and 20-year terms of the Firm Service contracts."⁸⁴

184. By comparison, Trans Mountain's Written Reply Evidence submitted for RH-001-2012 included a much more robust discussion of the risks Trans Mountain would face, particularly those risks it would be vulnerable to once operation commenced.⁸⁵

185. Trans Mountain is aware of significant risks as indicated in its list but has offered no discussion as to how it plans to accommodate a situation where one or more of these risks materialize.

3.8.1 Identified risks improperly considered

Shipper non-performance risk improperly considered

186. Trans Mountain identifies non-performance risk of contracting parties—"Failure of Firm Service shippers that impacts their ability to meet their contract obligations"—as significant. However, Trans Mountain has not provided a scenario or otherwise quantified the impact where volumes decrease below committed levels due to shipper failure.

187. Together, Canadian Natural Resources Limited (CNRL) and Cenovus Energy Corp. (Cenovus) represent 44% of committed volume. CNRL holds 169,000 barrels per day of capacity and Cenovus has 144,000 barrels per day.⁸⁶ Trans Mountain's potential shipper default risk is highly concentrated.

⁸⁴ *Ibid*, p. 4.

⁸⁵ *Supra* n.27, [A3F1C5](#), pp. 4-9, PDF pp. 6-11.

⁸⁶ Canadian Natural Resources Limited [Press Release](#), Canadian Natural Resources Limited Announces 2024 Third Quarter Results, October 31, 2024. "Commencing December 1, 2024, the Company will increase its capacity on the

Table 4: Trans Mountain’s Committed Shippers

2013 Committed Shippers	2024 Committed Shippers	Current Volume
BC Canada Energy Trading Company	BC Canada Energy Trading Company	Undisclosed
Canadian Natural Resources Limited	Canadian Natural Resources Limited	169,000 b/d
Canadian Oil Sands Limited		
Cenovus Energy Inc.	Cenovus Energy Inc.	144,000 b/d
Devon Canada Corporation		
Husky Energy Marketing Inc.		
Imperial Oil Limited	Imperial Oil Limited	Undisclosed
Nexen Marketing Inc.		
Statoil Canada Ltd.		
Suncor Energy Marketing Inc.	Suncor Energy Marketing Inc.	Undisclosed
Suncor Energy Products Partnership		
Tesoro Refining & Marketing Company	Marathon Petroleum Energy	55,000 b/d
Total E&P Canada Ltd.	ConocoPhillips Canada	Undisclosed
	MEG Energy Corp.	20,000 b/d
	Parkland Refining (BC) Ltd.	20,000 b/d

Source: Kinder Morgan Press Release, Annual Filings, Investor Presentations, Investor Relations Correspondence.

188. In 2013, when contracts were finalized, there were 13 parties that had signed on.⁸⁷ The number of committed shippers has since consolidated to nine.
189. Various oil companies such as Teck Resources and Athabasca Oil Company entered and exited commitments between the period 2013-2024 including PetroChina who transferred a capacity commitment for 75,000 barrels a day to CNRL effective December 1, 2024.⁸⁸
190. CNRL has increased its initial commitment by 125% from 75,000 barrels per day to 169,000 barrels per day.⁸⁹ In 2019, commitments increased from 75,000 barrels per day to 94,000 barrels per day likely related to CNRL’s acquisition of Devon Energy on May 29, 2019.⁹⁰ The recent transfer of 75,000 barrels per day from PetroChina takes CNRL’s capacity to a level where the company represents 24% of committed volumes.
191. Cenovus was committed to 125,000 barrels per day⁹¹ and increased that volume to 144,000 likely when it purchased Husky Oil in January 2021 as Husky held 19,000 barrels

Trans Mountain Expansion ("TMX") pipeline by 75,000 bbl/d to a total of 169,000 bbl/d." and Cenovus, [Investor Day March 25, 2024](#), Slide 19, PDF p.19.

⁸⁷ Kinder Morgan, [Press Release](#), Trans Mountain updates customer commitments for proposed expansion project, January 10, 2013.

⁸⁸ *Supra* n. 86.

⁸⁹ Canadian Natural Resources Limited, Annual Information Form for the year ended December 31, 2012, March 27, 2013, p. 8, Accessed through SEDAR.

⁹⁰ Canadian Natural Resources Limited, Annual Information Form for the year ended December 31, 2019, March 27, 2020, p.11, Accessed through SEDAR.

⁹¹ Cenovus’ Investor Presentation, July 2020 indicated that Cenovus held 125,000 barrels per day of committed capacity on Trans Mountain’s expansion. Presentation no longer available online.

per day of committed capacity.⁹² Cenovus' current capacity commitment of 144,000 barrels per day represents 20% of committed volumes.

192. Non-performance risk was a concern to Trans Mountain when there were 13 shippers. Non-performance risk has since increased as the number of shippers has declined while their relative importance has remained the same or increased, particularly CNRL and Cenovus. However, Trans Mountain has not provided a scenario or otherwise quantified the impact where volumes decrease below committed levels due to shipper failure.

Uncommitted capacity utilization risk improperly considered

193. Trans Mountain recognized during RH-001-2012 that one of the significant risks it is exposed to is the risk that uncommitted, or spot, utilization does not materialize. "It can also be expected that Uncommitted volumes will vary significantly over the contract period depending on market conditions and therefore Project revenues will vary."⁹³
194. Trans Mountain's Base Case relied on during this proceeding assumes 96% capacity utilization each year without alteration or interruption, beginning in 2025. This utilization rate includes 707,500 of committed capacity and 144,000 barrels a day of uncommitted capacity (approximately 80% of uncommitted) until 2039 when the 15-year contract for 49,500 barrels per day expires.⁹⁴ Trans Mountain assumes the additional 49,500 barrels a day will be consistently shipped on a spot basis until 2044 at a higher toll rate rather than seek alternative market egress.
195. Trans Mountain has not varied its uncommitted volume demand in its Base Case to reflect uncertainty, nor has it varied project revenues from them. Rather, it has adopted a certain outlook that incorporates significant, steady, and optimistic demand for uncommitted capacity utilization. Trans Mountain's financial performance relies heavily on spot capacity utilization revenue which, as communicated in the past, it anticipates being uncertain.
196. The revenue from forecast spot capacity utilization is significant. In 2025, Trans Mountain predicts spot utilization will generate \$694 million in revenue. Net of cost sharing with the shippers of \$229 million and the Province of BC of \$17 million leaves Trans Mountain with an expected \$448 million in net revenue from spot sales in 2025.⁹⁵ Net uncommitted revenue represents 15% of Trans Mountain's \$3,011 toll revenue net of sharing expected in 2025.⁹⁶

⁹² Husky Energy Conference Call Q2 2018, "JEFF RINKER: Yes. So, we're committed to 19,000 barrels a day on the Trans Mountain expansion and 10,000 barrels a day on Keystone XL." No longer available online.

⁹³ *Supra* n.27, [A3F1C5](#), p. 8, PDF p. 10.

⁹⁴ Trans Mountain, Response to CER IR No.4.1, [Attachment 4.1-2 Quantitative Financial Outlook](#), 4.1b.1, Line 6, PDF p. 14.

⁹⁵ *Ibid*. Spot revenue sharing with the Province of BC is \$25 million a year under no spot capacity utilization and therefore is paid regardless out of committed revenue. Net spot utilization revenue to Trans Mountain in 2025 is $\$694 - \$229 - (\$42 - \$25) = \$448$

⁹⁶ *Ibid*. PDF p.14. Year 2025: $\$448 / \$3,011 = 0.14879$ or 15%.

197. By 2040 uncommitted capacity utilization is expected to provide 22% of Trans Mountain's forecast revenue net of sharing.⁹⁷
198. When Trans Mountain undertook its profitability analysis during RH-001-2012 it did not rely on spot capacity utilization as a source of revenue to meet its financial obligations. The project was required to pay for itself with committed revenue over the life of the contracts. "The Fixed Toll Component and the Variable Toll Component are intended to allow for the recovery of all project costs over the duration of the contract period."⁹⁸
199. During cross-examination at RH-001-2012 Trans Mountain's Director of Shippers Services, Mr. MacFarlane, was asked "In terms of the 20 percent which is uncommitted capacity, am I correct in understanding Trans Mountain has not undertaken a forecast of the needs of uncommitted capacity over the 15 or 20-year period?" Mr. MacFarlane answered, "That's correct."⁹⁹
200. Trans Mountain has commissioned two spot demand studies for this proceeding that are subject to confidentiality. This is in direct contrast with its approach during RH-001-2012 where it elected to avoid a reliance on spot revenue forecasts because of the perceived risk. Revenue from committed shippers was expected to be sufficient to cover all the costs over the life of the contracts.
201. Trans Mountain's committed shippers can sell any of their capacity in a secondary market. "Uncommitted Shippers can secure capacity in the secondary market through, for example, buy/sell arrangements whereby a Firm Service Shipper would be the Shipper of Record on the Trans Mountain system but Nominate and Tender Petroleum at the direction of the Uncommitted Shipper."¹⁰⁰
202. Trans Mountain has not considered the impact that the availability of capacity in the secondary market might have on spot capacity utilization in its internal analysis, nor does it appear Trans Mountain directed its outside consultants to do so. "Trans Mountain is aware that Firm Service shippers and potential uncommitted shippers each have the option of participating in the secondary market for committed barrels. However, Trans Mountain has no visibility into such potential secondary market transactions. To inform its capacity utilization assumptions, Trans Mountain used internal and third-party market analysis and operational considerations as explained in its response to CER 4.8 c). No specific assumptions were made with respect to the level of potential secondary market transactions."¹⁰¹

⁹⁷ *Ibid.* Year 2040: \$1,331-\$327-\$42+\$25= \$987 net uncommitted revenue. \$987/\$4,442 = 0.2222 Or 22%.

⁹⁸ Trans Mountain, Updated Responses to Suncor Energy Marketing Inc and Suncor Energy Product Partnership, Information Request No.1, January 10, 2013, 1.47 (a), [A3E7F6](#), PDF p. 88.

⁹⁹ Trans Mountain, Transcripts, [Volume 1](#), RH-001-2012, February 12, 2013, paras. 390-391, PDF p 39.

¹⁰⁰ Trans Mountain, Tsleil-Waututh Nation Information Request No. 2 to Trans Mountain, No 2.4 (d), [A9D7X6](#), PDF p. 27.

¹⁰¹ *Ibid*, No. 2.4 (f), p. 28.

203. Trans Mountain relies on internal and third-party analysis without ensuring that analysis incorporates one of the key risks to spot capacity utilization—a secondary market where committed shippers can resell any capacity they do not want or need.
204. A committed shipper has an incentive to actively market barrels in a secondary market and a would-be spot shipper has an incentive to actively seek these barrels out.
205. Table 5 below is reproduced from Trans Mountain’s Application¹⁰² and illustrates toll premiums and discounts due to volume commitment and contract term.
206. An uncommitted shipper from Edmonton to Burnaby pays 32% more than a 20-year shipper with 75,000 or more barrels a day of capacity.¹⁰³

Table 5: Based Fixed Toll, Premiums and Discounts

Table 3-2: Base Fixed Toll, Premiums and Discounts

Edmonton to Burnaby Movements			
Contract Term	Volume Commitment		
	Uncommitted	Less than 75 KBPD	75 KBPD or greater
No Contract	Base +10%		
15-Year Contract		Base Fixed Toll (Base)	Base -7.5%
20-Year Contract		Base -10%	Base -16.75%

Note: Discount for “20-year Contract, Greater than or equal to 75 kbpd” is calculated as: $1 - (0.9 \times 0.925) = 0.1675$, or 16.75%.

207. Using Trans Mountain’s figures, assume the Base Fixed Toll is \$10 per barrel. This means the 20-year committed shipper with 75,000 barrels a day or greater would face a fixed toll of \$8.33 per barrel ($\$10 \times .9 \times 0.925$). The uncommitted shipper would pay \$11 per barrel in Trans Mountain’s spot market ($\$10 \times 1.1$). The uncommitted shipper pays 32% more than a 20-year committed shipper with 75,000 or greater volume commitment.
208. There is an incentive for a committed shipper and a would-be spot shipper to negotiate a price in the private secondary market and both be better off. In this example, the range is somewhere between \$11 and \$8.33 per barrel. The committed shipper profits by making more from the uncommitted buyer than they would pay under contract and the uncommitted shipper pays a lower toll rate than they would at the posted uncommitted Trans Mountain rate.
209. Depending on the committed shipper’s circumstance, if any of its committed capacity would otherwise go unused, there is an incentive to minimize sunk cost by selling the

¹⁰² Trans Mountain, Application for Interim Commencement Date Tolls, Attachment 3, Determination of the Fixed Toll Component for the Interim Tolls, [A8Q6A2](#), p. 2, PDF p.3.

¹⁰³ A committed shipper receives a price that is 7.5% below the Base Fixed Toll based on volume over 75,000 barrels a day and a further 10% discount under a 20-year contract. An uncommitted shipper pays 10% greater than the base toll. 0.8325 to 1.1 is a percentage increase of 32%.

capacity below \$8.33 per barrel. Theoretically the price at which a committed shipper would sell unused capacity would approach zero, particularly if there were other business considerations at play. What this means is that the demand for Trans Mountain's spot capacity is fundamentally affected by the degree to which its committed shippers might have unused capacity. It seems reasonable to assume that before entering Trans Mountain's spot market would-be spot shippers would stop by the secondary market first.

210. A proper analysis would consider the impact the secondary market might have on demand. Trans Mountain has not done so here.

Unfavourable Final Toll determination or change in existing toll methodology

211. Trans Mountain has identified an unfavourable final toll determination or change in existing toll methodology as a significant risk. Trans Mountain is requesting that the CER approve its Tolling Methodology.

212. An unfavourable toll determination would be one that does not result in an increase to Trans Mountain's toll revenue to meet the Fair Return Standard. This is the risk Trans Mountain faces, although this is not the risk it has identified.

Pipeline operating costs or capital asset costs improperly considered

213. Trans Mountain's asymmetric pipeline operating cost risk and sustaining capital risk have not been effectively considered.

214. Trans Mountain has postulated 20 years of operating performance when the company recognizes "it is hard enough to postulate reasonable values for, say, the likely range of inflation rates over the next year, even with full knowledge of today's conditions."¹⁰⁴ Trans Mountain has provided no scenarios where it alters its anticipated inflation impact on its operating expenses.

215. During RH-001-2012 Trans Mountain's Reply Evidence criticized Suncor's expert witness' evidence for assuming \$71 million dollars per year in sustaining capital over the life of the contracts. Suncor's expert obtained the figure for sustaining capital from Trans Mountain's Cost of Service data for the first year of operation and extended the figure for his Cost-of-Service analysis conducted over the life of the contracts.

216. "Mr. Matwichuk's analysis has used \$71 million dollars per year as his assumption in the ROE analysis. Asymmetric risks associated with sustaining capital have not been given consideration in Mr. Matwichuk's analysis. Like operation and maintenance costs, Trans Mountain's experience is that there is considerably more risk that sustaining capital costs could increase than decrease."¹⁰⁵

¹⁰⁴ *Supra* n.27, [A3F1C5](#), p. 4, PDF p. 6.

¹⁰⁵ *Ibid*, p. 6, PDF p. 8.

217. More than a decade later, Trans Mountain's first full calendar year of sustaining capital spend is estimated to be \$50 million.¹⁰⁶ Sustaining capital spend in Trans Mountain's Base Case does not reach \$71 million for more than a decade and rises gradually thereafter to reach \$85 million by 2043. There has been no consideration given to a change in the material condition of the new asset or the legacy pipeline which is 72 years old. As Trans Mountain's expert Mr. Reed said during RH-001-2012 cross-examination "He has assumed ... sustaining capital will be \$71 million a year for all 20 years and be unaffected ... by any change to the material condition of the assets. That's also, in my view, a heroic assumption."¹⁰⁷
218. In 2012, Trans Mountain expected to spend \$71 million for sustaining capital in the first year of operation on a \$5.4 billion pipeline expansion or 1.3% of the project budget. Trans Mountain now budgets \$50 million in 2025 on a \$34.5 billion project or 0.15% of the project budget.
219. Given that a sustaining capital spend of 1.3% of the project budget was a starting point in 2012, Trans Mountain's sustaining capital spend starting point estimate in its Quantitative Financial Outlooks at 0.15% is a significant deviation from what Trans Mountain put forward at RH-001-2012.

Interest rate risk inadequately considered

220. As explained in Section 3.6.1 above, Trans Mountain has not adequately addressed the challenges it faces from the short-term nature of its debt facilities, the magnitude of its debt, its reliance on an increase in government funded debt to assist in reducing the Syndicated Loan obligation for the first three years of operation, and its ongoing need for subsidized terms and conditions, including below market interest rates.
221. Trans Mountain's Quantitative Financial Outlooks assume that the interest rate charged on its loans with TMP Finance remains fixed at 5% over the life of the contracts and the interest rate charged on its Syndicated Loan remains at current levels for the life of the contracts.
222. Notwithstanding the recent decline in market interest rates, the rates Trans Mountain is relying on for the life of the contracts are low relative to historic norms. Trans Mountain is exposed to asymmetrical interest rate risk that it has not properly considered in its outlooks, particularly on its Syndicated Loan, which is tied directly to market rates.

Income tax rate risk not adequately considered

223. Trans Mountain has assumed that a combined federal and provincial income tax rate of 24.67% continues for the 20-year forecast period. This is in contrast to RH-001-2012,

¹⁰⁶ Trans Mountain's Base Case, [CER 1.4 b.1](#), line 39, PDF p.14

¹⁰⁷ Trans Mountain Pipeline ULC, Part IV Application, Transcripts Volume 2, February 13, 2013, [A3F4W5](#), para 1874, PDF p.42.

wherein Trans Mountain anticipated that a tax rate of 25% was likely to rise over the life of the contracts.¹⁰⁸

224. Trans Mountain expressed its concern during RH-001-2012 that a 25% combined federal and provincial rate would be overly optimistic as follows. “The assumption in the Matwichuk model is that a 25% tax rate remains constant throughout the life of the project... Tax policy is a function of overall public policy and political risk. Trans Mountain has no assurance that Mr. Matwichuk's 20-year assumption can be maintained. There is a greater likelihood of tax rates being above the 25 percent estimate than falling below this value in the future.”¹⁰⁹

225. Trans Mountain’s Quantitative Financial Outlooks are based on a combined federal and provincial income tax rate lower than the rate relied on in the Matwichuk model. Trans Mountain has included no outlook where this assumption is changed.

3.8.2 Significant Risks not identified

226. There are significant risks Trans Mountain is exposed to that it has not listed. These include, systemic risk, climate related risk, energy transition risk, and de-rating risk.

No consideration of systemic risk

227. Trans Mountain’s ongoing financial challenges represent a significant risk that Trans Mountain has failed to identify. Trans Mountain has not recognized the degree to which its financial integrity is compromised under the Tolling Methodology and how this stress impacts corporate culture.

228. Ongoing financial pressures from insufficient revenue put pipeline safety and integrity at risk, notwithstanding Trans Mountain’s commitment to maintain safety and integrity as part of its Tolling Methodology approval.

229. During RH-001-2012, the NEB was concerned about Trans Mountain bearing the risk of incremental safety and integrity costs. An increase in these costs were understood to directly reduce Trans Mountain’s financial return and hence represented an incentive to avoid such costs should they increase.¹¹⁰

¹⁰⁸ Trans Mountain, Tseil-Waututh Nation Information Request No. 2 to Trans Mountain, No 2.1 (w), [A9D7X6](#), PDF p. 9.

¹⁰⁹ *Supra* n.27, [A3F1C5](#), p.7, PDF p. 9.

¹¹⁰ During cross examination, Mr. Scott Stoness, Vice-President of Finance and Regulatory Affairs for Kinder Morgan Canada, was asked by Board Counsel Mr. Kiril Dumanovski, “So practically speaking, every dollar spent on integrity or safety is a dollar that Trans Mountain cannot recover as return on capital; is that correct?” Mr. Stoness responded, “...that’s correct.” Mr. Dumanovski continued, “Could you please comment on whether the applied-for toll methodology could create incentives for the company that could have negative impact on any required integrity and safety work after the commencement of operation and for the duration of the contract terms?” Trans Mountain Pipeline ULC, Part IV Application, Transcripts Volume 3, February 14, 2013, [A3F4H7](#), para 4530 - 4531, 4533, PDF p. 130.

230. Given that Trans Mountain’s financial return has been significantly reduced and it is operating under cash flow constraints there should be even more concern over the incentive this has created for Trans Mountain to not meet its safety and integrity requirements than there was during RH-001-2012.
231. Financial pressure over time results in conditions that impact corporate culture giving rise to systemic risk. It will be well understood by Trans Mountain management and staff that revenues are determined by 20-year take or pay contracts and that resources are limited, unlike the historical situation where safety and integrity management costs would be passed through to shippers on an annual basis in the Incentive Toll Settlement process.
232. Ongoing financial pressures cause operating practices and procedures to move away from known norms, and these lead to decisions over time, which once compounded, are known to cause major or catastrophic events.
233. In this hearing, Trans Mountain has applied for tolls that represent a ‘break-even’ according to Trans Mountain although they fail to meet the Fair Return Standard as I have concluded through my analyses. The pressure to minimize cost for safety and integrity work, for the duration of the contracts, has significantly increased which should give rise to significant concern.

No consideration of climate related risks

234. Trans Mountain has not included in its list of risks “high probability, high consequence” events it has experienced in the recent past and that could seriously impact its ability to meet its financial obligations. Trans Mountain has not identified risk related to climate change such as the impact of atmospheric rivers, floods, winter storms or wildfires.
235. The Syndicated Facility is an Equator Principles 4 (“EP4”) compliant revolving debt facility. EP4 is a risk management framework adopted by financial institutions to identify, assess, and manage environmental and social risks for large infrastructure projects.
236. The Equator Principles disclosure requirements state that at a minimum, a summary of the Environmental and Social Impact Assessment (ESIA) be accessible and available online and that it includes a summary of the project’s climate-related risks and the potential impacts of the identified risks.¹¹¹ This requirement has not been complied with.
237. Although the CER ordered Trans Mountain to produce the ESIA report, Trans Mountain declined, citing the denial of third-party consent. As such, I cannot evaluate or compare Trans Mountain’s approach to that of the syndicated banks through the EP4 loan.¹¹²

No consideration of energy transition risk

¹¹¹ [Guidance Note on Climate Change Risk Assessment](#), Equator Principles, September 2020, p. 13, PDF, p. 14.

¹¹² *Supra* n.71, Tsleil-Waututh Nation IR No.2.1(d), [A9F3D7](#), PDF p.7.

238. Trans Mountain has not indicated that it has reflected climate related transition risks in its outlooks, although it is aware of them. Trans Mountain evaluates “climate-related physical and transition risks (i.e., risks related to the transition to a low carbon economy). Two important transition-related risks for TMC are carbon tax and oil demand reduction. Carbon tax can have an indirect impact on TMC since it can make Canadian oil and gas production more costly while changes in oil demand can potentially have more direct impacts. However, TMC has several long-term “take-or-pay” contract commitments in place with its shippers, ranging from 15 to 20 years, which makes TMC more resilient to those impacts.”¹¹³ The contracts do not protect Trans Mountain’s uncommitted capacity from these transition risks.
239. While Trans Mountain’s parent, CDEV, states that Trans Mountain recognizes the financial risk inherent in oil demand reduction in its reporting, Trans Mountain has ignored this risk in the preparation of its Quantitative Financial Outlooks. The most conservative outlook scenario 4.1b.3 projects 96% capacity utilization from mid-2034 – 2044.
240. Trans Mountain is protected to a certain extent by the existence of the long-term take or pay contracts for 80% of capacity until April 2039 and for 74% to April 2044, but its uncommitted capacity is exposed. Oil demand forecasters, including the International Energy Agency (IEA), and the CER predict a decline in world oil demand beginning in the near to medium term.¹¹⁴
241. A reliance on uncommitted capacity utilization revenue during the life of the contracts is risky. When Trans Mountain applied for approval of its Tolling Methodology during RH-001-2012 it was not a risk Trans Mountain was willing to take. Since that time, it has become widely recognized that the world economy is transitioning to a low carbon economy and the demand for crude oil will begin declining.
242. Developments since RH-001-2012 indicate the risk to spot capacity utilization, particularly in the latter years of the contracts, has increased. Trans Mountain’s Quantitative Financial Outlooks indicate Trans Mountain has failed to consider the increased risk to uncommitted capacity utilization represented by an energy transition and corresponding decline in demand for fossil fuels.

No consideration of de-rating risk

243. Trans Mountain has also not addressed voluntary and involuntary pressure restrictions or de-rating applied for pipeline integrity reasons. De-rating reduces throughput capacity and is a cost Trans Mountain would be required to bear. Pressure restrictions could be applied to one or both Trans Mountain’s existing Canadian lines. Trans Mountain’s Puget Sound

¹¹³ CDEV, [Annual Report](#), 2020, p. 7, PDF p. 9.

¹¹⁴ International Energy Agency, [World Energy Outlook 2024](#), Global Liquids Demand by Scenario, Table 3.1, p. 137, PDF p. 137, and Canada Energy Regulator, [Canada’s Energy Future 2023](#), Figure R.33, p. 90, PDF p.93.

pipeline is also at risk.¹¹⁵ A restriction on the Puget Sound line would have cascading consequences for the Canadian assets.

244. Trans Mountain has experienced voluntary and involuntary pressure restrictions at various times since at least 2011. In 2013 throughput was reduced on the legacy pipeline. “Kinder Morgan undertook a precautionary pressure restriction on the Trans Mountain Pipeline as a result of a leak detected in June 2013. The pressure restriction was equivalent to 80% of the highest operating pressure experienced during the last 90 days prior to 13 June 2013. The pressure restriction was applied to each segment of the Trans Mountain Pipeline. The lifting of the pressure restriction is subject to the approval of the National Energy Board pursuant to SO- T260-005-2013.”¹¹⁶

3.8.2 Trans Mountain’s Base Case not supportable

245. Trans Mountain’s Base Case Quantitative Financial Outlook, which is also its Best Case, does not account for the significant risks Trans Mountain faces during the next 20 years of operation and is not reliable. Since Trans Mountain’s Base Case differs from the other two scenarios it has provided only with respect to uncommitted capacity usage, failure to identify the potential impact of the myriad of other risks Trans Mountain is exposed to renders all scenarios unreliable.

246. The validity of negotiated settlement methodology depends on commercially sophisticated parties evaluating their risks and protecting against them so they can meet their financial and other obligations. If that balance of interests were achieved, Trans Mountain’s Base Case would look very different; the revenue from the tolls would be significantly higher, costs would be less optimistic, and its capital structure would not require subsidization.

247. Trans Mountain has presented an outlook that measures return on equity (ROE) over a 20-year period. Although its projected ROE is negative in 2024 Trans Mountain projects that it will turn slightly positive in 2025 and rise over the term of the contracts. Trans Mountain predicts that higher ROE in the final seven years of the contracts will recover the shortfall in market return it projects during the first 13 years of the contracts.

248. In my professional opinion, I do not agree that Trans Mountain’s Base Case is a reasonable representation of the returns from the expansion. The rate of return will be driven by the risks Trans Mountain faces and how, over the next two decades, those risks develop. There are numerous risks Trans Mountain has identified and some they have not. None are reflected in the Base Case.

249. Trans Mountain’s Financial Outlook is based on a set of assumptions that are unsupportable.

¹¹⁵ Kinder Morgan Cochin ULC, Responses to National Energy Board, IR No.1, NEB File: OF-Fac-Oil-K077-2012-01, November 9, 2012, [A3D2S8](#), p.1, PDF p. 2. Reference provided as an example of US regulatory action affecting Canadian throughput.

¹¹⁶ Trans Mountain, IR Responses to Imperial and Suncor, RHW-001-2013, April 9, 2014, 3 (a), [A3V7Z4](#), PDF p. 5.

250. Trans Mountain's spot capacity utilization projections of an average of 30,600 barrels per day for 8 months of operation in 2024 appear not to have been met. Throughput performance to the end of October indicates that there was a shortfall in revenue for August to October compared to Trans Mountain's projected revenue from spot capacity of at least \$45 million.¹¹⁷ Assuming similar throughput for November and December as occurred in October, revenue by year end would be approximately \$57 million lower than predicted.
251. A \$57 million reduction in revenue in Trans Mountain's Quantitative Financial Outlook 4.1b.1 for 2024 results in a decline in equity return to -\$258 million. Trans Mountain's ROE in 2024 goes from -2.6% to -3.2%.¹¹⁸ A 3.2% decline in revenue causes ROE to fall by 23%.¹¹⁹
252. Not only is Trans Mountain's Base Case dependent on a scenario that overstates likely equity return because it fails to incorporate risk, even a small change to the underlying assumptions results in a significant change to its ROE.
253. The CER's requested Financial Outlook 4.1b.3 reflects the sensitivity of Trans Mountain's case to spot capacity utilization. ROE in 2024 falls from -2.6% in Trans Mountain's Base Case to -3.8% (a 46% decline in ROE) solely because a modest level of spot capacity utilization in 2024 does not occur. Trans Mountain's Base Case for 2025 assumes ROE is 0.6%, whereas without uncommitted capacity utilization, ROE falls to negative 5.6%.¹²⁰
254. A reliance on Scenario 4.1b.3. to inform likely ROE over the life of the contracts is not advised since the only risk this scenario considers is the risk of unutilized spot capacity in the near and medium term.¹²¹ None of Trans Mountain's other underlying optimistic assumptions change in 4.1b.3 from those assumed in its Base Case.
255. Trans Mountain's Financial Outlooks, particularly its Base Case, do not reflect the returns from operating the project because they are based on unsupportable assumptions and are subject to significant variance from marginal changes in results. As Mr. Reed stated during RH-001-2012 when presented with a similar analysis attempting to reflect Trans Mountain's ROE over 20-years, but failing to appropriately consider the risks, "So I absolutely cannot accept ... that these are the returns for this project. They are not the returns

¹¹⁷ See Technical Appendix 3.4.

¹¹⁸ Negative \$258 million as a percent of \$7,785 million = -3.31%

¹¹⁹ \$57 million as a percent of \$1,785 million = 3.2%.

¹²⁰ Trans Mountain's Base Case, [CER 1.4 b.1](#), line 35, PDF p.14 and 1.4 b.3, line 35, PDF p. 18.

¹²¹ Scenario 4.1b.3. assumes that in 2034 spot capacity utilization occurs and that by 2035 the pipeline runs at 96% each year until 2044. There is no consideration given to the potential impact of the expiration of 15-year contracts and how that might increase available spot capacity, or for a potential decline in crude oil demand by the mid-2030s. Further, Trans Mountain's tolls rise by 2.5% per year and are likely to be significantly higher than any competing alternative. The impact these tolls might have on spot capacity demand has also been ignored in 4.1b.3. Further, no consideration has been given to the role the secondary market may play, which will likely intensify as spot tolls rise due to the 2.5% annual escalator.

for this project. They are (a) 20-year derivation based on a set of assumptions that I think are completely unsupportable.”¹²²

3.9 Trans Mountain’s profitability metrics are not informative

256. Trans Mountain’s Base Case and its two related Outlooks do not supply a reliable look at Trans Mountain’s potential returns each year over the 20-year life of the contracts because they ignore risk.
257. Trans Mountain has conducted further analysis on the annual return on equity figures in its Quantitative Financial Outlooks that is not informative.
258. In CER IR No. 2.1 Quantitative Financial Outlooks Trans Mountain introduced a measure for profitability it identified as ‘20 Year Simple Average ROE’ bolded and highlighted in a box. Trans Mountain provided no discussion on why it introduced this metric or how it could be interpreted, although the implication was that it provided a benchmark for average return on equity over the period.
259. There are fundamental flaws with Trans Mountain’s approach to presenting a measure of profitability by relying on an arithmetic average of a stream of equity returns even if the stream of equity returns could be considered reliable, which they cannot. A simple average return ignores the concept of the time value of money and does not provide any insight into business risk, value, or financial stability.
260. Trans Mountain understands the importance of considering the time value of money when evaluating financial performance and has relied extensively on discounted cash flow analysis in its expansion project evaluations since at least 2012, as explained in Section 3.4 above.
261. Trans Mountain’s expert witness during RH-001-2012, Mr. Reed, explained that, “as discussed further in the Company Reply Evidence, Trans Mountain utilizes a discounted cash flow (“DCF”) analysis to evaluate its investment returns, **not a COS (cost of service) approach**...DCF analysis discounts forecasted future cash flow projections at a determined rate of return to see if a positive present value can be achieved, or solves for the “internal rate of return” or “IRR” that exactly balances cash inflows and outflows in present value terms.”¹²³ (Emphasis added.)
262. During RH-001-2012 Mr. Reed cautioned against the use of an averaging approach on ROE because of how it would significantly overstate potential return. Mr. Reed critiqued the evidence of Suncor’s expert witness, Mr. Matwichuk.
263. Mr. Matwichuk developed a return on equity each year for twenty years under a cost-of-service scenario. He then calculated a geometric average of the annual ROEs. Mr. Reed

¹²² Trans Mountain Pipeline ULC, Part IV Application, Transcripts Volume 2, February 13, 2013, [A3F4W5](#), para. 1877, PDF p 42.

¹²³ Trans Mountain Pipeline ULC, Reply Evidence of John J. Reed, January 31, 2013, [A3F1C6](#), p. 8, PDF p. 10.

concluded that Mr. Matwichuk’s use of a geometric average made no sense. “I have never seen an example of a firm using a geometric average return to make investment decisions, nor would it make sense to do so.”¹²⁴

264. A geometric average ROE and simple average ROE are similar concepts. While a geometric average takes the product of ROEs to the power of nth root (in this case n=20 years), a simple average takes the sum of the ROEs and divides by n. Neither approach takes into consideration the time value of money or risk. The simple average, however, will always be higher than its geometric counterpart.
265. To illustrate the problem of relying on a method that ignores the time value of money, Mr. Reed provided a table that compares a geometric average calculation for hypothetical returns for 20 years and an Internal Rate of Return (IRR) calculation for the same set of cash flows that produce the returns.¹²⁵ The return calculated for the geometric average was 24.19% while the IRR approach produced 7.99%.
266. Using Mr. Reed’s figures from his table and applying Trans Mountain’s simple average return on ROE approach, the ‘20 Year Simple average ROE’ approach calculates a 31.63% return. As expected, a simple average is higher than a geometric average and IRR.
267. Trans Mountain’s ‘20 Year Simple Average ROE’ does not account for the risk or uncertainty of the financial outlooks, the timing of revenues and expenditures, or the time value of money, whereas NPV and IRR do.
268. Further, there are factors that significantly affect a return on equity calculation. ROE relies on net income, depreciation rates, rate base and debt level while these are omitted from NPV and IRR since these methods rely on cash flow.
269. In an ROE calculation, for example, depreciation is included over the expected life of the asset. The lower the depreciation—the longer the expected life of the asset—the higher the ROE. This is incompatible with an IRR approach or NPV approach conducted over a time horizon that considers the life of the contracts. Further, depreciation is not included in discounted cash flow analysis, so the method chosen to allocate depreciation each year does not affect the results.¹²⁶
270. The ‘20 Year Simple Average ROE’ measure is fundamentally flawed and cannot be relied upon as an indication of profitability or ability to meet financial obligations.

¹²⁴ *Ibid.*

¹²⁵ See Technical Appendix 3.5 for Mr. Reed’s Table 1 showing the IRR and geometric average. I have added a simple average ROE calculation to further indicate the inappropriate application of this approach by Trans Mountain.

¹²⁶ For example, Trans Mountain is depreciating the expansion project over a 35-year expected life using a straight-line depreciation method. If Trans Mountain relied on a declining balance depreciation method, or depreciated the project over a shorter time horizon, annual depreciation expense would be higher, ROE in the early years would be lower, but cashflow would remain unchanged. For depreciation time horizon, see: Trans Mountain Pipeline ULC, 2024 Depreciation Study, Concentric Advisors, September 2024, [A9D7I4](#).

271. Trans Mountain consistently and regularly relies on discounted cash flow analysis—either NPV or IRR—but would not undertake such analysis for this hearing. Trans Mountain chose instead to present a simple average ROE metric that includes the problems referred to above.
272. In IR No. 4.1-2 Quantitative Financial Outlooks Trans Mountain produced a new measure it identified as ‘Levelized ROE’. Trans Mountain provided no discussion on why it introduced this metric or how it might be interpreted. Introducing ‘Levelized ROE’ during the fourth round of outlooks was not only a new addition, but it also appears to be a concept unique to this hearing.
273. Trans Mountain was asked in TWN IR No. 2.3 (gg) to “Please indicate when Trans Mountain has relied on the concept of a Levelized ROE ... to inform its understanding of project return and provide the analysis. Please include a discussion of Trans Mountain’s understanding of when and how this measure is used in financial analysis, and the relevance or value of this measure to inform decision makers, specifically since it relies on net income (Equity Return (Return on Capital)) rather than cash flow.”¹²⁷
274. Trans Mountain’s response indicates that it has not relied on the concept of a ‘Levelized ROE’ to inform its understanding of the Tolling Methodology applied to Trans Mountain’s expansion.¹²⁸ Trans Mountain was unable to indicate its understanding of when and how the measure is used in financial analysis or the value of this measure to inform decision makers.
275. Trans Mountain’s ‘Levelized ROE’, notwithstanding its attempt to incorporate the time value of money, is an unusual approach in my professional experience. Trans Mountain has not explained what it means on the record or provided caveats for its interpretation.
276. Trans Mountain has presented Quantitative Financial Outlooks that are overly optimistic because they do not incorporate expected risks. It has attempted to present unusual and unorthodox financial integrity metrics rather than conduct the expected NPV and IRR analyses.
277. The ‘20-year Simple Average’ and ‘Levelized ROE’ metrics Trans Mountain has provided in support of its Tolling Methodology cannot be relied upon. Alternative methods must be drawn upon to address the issues that the CER has identified in its List of Issues 2 and 3.

3.10 Accommodating Trans Mountain’s risks

278. An alternative, more reliable approach than what Trans Mountain has presented in its Quantitative Financial Outlooks is to return to Trans Mountain’s consideration and

¹²⁷ Trans Mountain, Tsleil-Waututh Nation Information Request No. 2 to Trans Mountain, No 2.3 (gg), [A9D7X6](#), p. 21.

¹²⁸ Tsleil-Waututh Nation, Motion Chart Trans Mountain Pipeline ULC, No. 2.3 (gg), [A9E3F3](#), p. 7.

accommodation of its risks when it was accountable to commercial considerations. The commercially sophisticated reasoning behind Trans Mountain's decision to protect itself against potential risks continues to be of merit.

279. Trans Mountain accounted for its risk exposure when it set its hurdle rate at a 12% - 15% unlevered IRR over the 20-year term of the committed contracts. Its financial outlook relied on revenue from committed shippers—not committed and spot—since Trans Mountain understood the burden of the asymmetrical risks it would face. Taking on the added risk of relying on unpredictable uncommitted capacity revenue only increases Trans Mountain's risk profile.
280. Trans Mountain's Base Case and the two other Quantitative Financial Outlooks it has provided in CER Response 4.1b.1-3 tell us that the expansion project, under any of the scenarios Trans Mountain has provided, falls very short of delivering a 12 – 15% IRR through the 20 years of the investment.
281. Trans Mountain's Financial Outlook 4.1b.3—the delayed uptake of uncommitted capacity—somewhat approximates Trans Mountain's former approach. It must be stressed that this approach relies on an increased reliance on spot capacity utilization revenue in the latter part of the outlook.
282. The discount rate Trans Mountain has selected is 11% which is below the 12% -15% range Trans Mountain formerly relied on.
283. The present value of the revenue shortfall to accommodate the risks Trans Mountain faces, under Trans Mountain's slower uptake of spot capacity scenario, is \$20.3 billion. This estimate is based on Trans Mountain's estimates of the present value of its cash flows as presented in response to CER IR No. 4.1b.3 and an estimate of the present value of the capital outlay as further explained in Section 3.4 above and Technical Appendix 3.1.
284. A revenue requirement of \$20.3 billion is a conservative estimate of the shortfall delivered by the Tolling Methodology since the discount rate of 11% applied is lower than 12 – 15% Trans Mountain relied upon during RH-001-2012 and significant spot capacity revenue is assumed to occur beginning in mid-2034. Both assumptions will reduce the magnitude of the Net Present Value loss than if the scenario reflected a 12 – 15% discount rate and no spot capacity utilization over the life of the contracts.
285. Trans Mountain's use of unconventional and novel metrics in this hearing should not be relied upon to determine the revenue Trans Mountain requires to maintain its financial viability and meet the tolling standards set by the CER.
286. An NPV analysis conducted on its financial outlook indicates that the tolling methodology needs to be altered or modified to generate at least \$20 billion, in current dollars, to meet the Fair Return Standard.

3.11 Cost Based/User Pay Principle not met

287. The Cost Based/User Pay Principle is based on the notion that tolls are just and reasonable when shippers who use a pipeline system pay the cost incurred to supply those transportation services to them. When costs are not borne by the shippers this principle is violated, and tolls are not just and reasonable.
288. The tolls determined by Trans Mountain's Tolling Methodology result in less than half the cost of the expansion being passed through to the committed shippers. This is because of the capped versus uncapped cost pass through feature in the shipper contracts.
289. Trans Mountain's current capital cost estimate is \$34.5 billion net of Firm Service Fees and including an Allowance for Funds Used During Construction (AFUDC).¹²⁹
290. The first \$7.4 billion of the cost is captured 100% to the account of the committed shippers. The remaining \$27.1 billion is shared between Trans Mountain and the shippers with \$8.1 billion having been passed through to shipper tolls at the rate of \$0.07 per \$100 million. The capital cost reflected in shipper tolls is \$15.5 billion while Trans Mountain is left with a capital cost of \$19 billion not covered by tolls.
291. At a capital cost of \$34.5 billion the committed shippers bear 45% of the project cost while Trans Mountain bears 55% of the cost. In other words, the revenue base for the pipeline is expected to cover less than half its cost.
292. Although the allocation of capital costs is 45-55, this is a function of the uncapped cost pass through at a rate of \$0.07 per \$100 million. It is possible that this rate could continue to cover all costs even though it was not applied to all costs. This possibility requires further exploration.
293. First it is necessary to examine how the cost pass through rate translates to the actual tolls, particularly since the allocation of \$0.07 per \$100 million in capital costs was intended to cover Trans Mountain's definition for meeting its financial obligations even should project costs rise somewhat above the CPCN budget level.
294. Taking the CPCN Indicative Fixed Toll, or Base Fixed Toll of \$5.76 per barrel¹³⁰ which covered 100% of the project's cost and calculating what the toll would be if shippers continued to pay for the project's cost—if they covered capped and uncapped costs—gives an estimate of what tolls would be if all cost overruns were passed through.
295. The capital cost increase from the \$7.4 billion CPCN budget to the \$34.5 budget is \$27.1 billion. At a rate of \$0.07 for every \$100 million in capital cost this increase gives rise to an incremental indicative toll of \$18.95 per barrel.

¹²⁹ Trans Mountain, Response to CER IR No. 5.1(a)2, [A9D9W1](#), October 9, 2024, p.6, PDF p. 7.

¹³⁰ Trans Mountain, Application for Interim Commencement Date Tolls, Attachment 3, [A8Q6A2](#), p.8, PDF p.9.

296. The Base Fixed Toll under a total passthrough methodology using Trans Mountain’s rate of \$0.07 per \$100 million is therefore \$24.71.¹³¹ Since shippers are currently facing a Base Fixed Toll of \$11.46 per barrel, the toll shortfall is \$13.25 per barrel.¹³²

3.12 A deeper dive into cost pass through

297. It is unlikely that the cost passthrough rate on uncapped costs of 7 cents per \$100 million would be sufficient for the Tolling Methodology to meet the Fair Return Standard at a cost of \$34.5 billion since only 30% of the \$27.1 billion in cost overruns have been passed through to shipper tolls.¹³³

298. However, the passthrough rate is worthy of a closer examination as it is possible that the Tolling Methodology that covered total project cost—at both \$5.4 billion when the methodology was approved and \$7.4 when the CPCN budget was accepted by the shippers—delivered tolls that were excessively high.

299. A 7-cent toll increase for every \$100 million in uncapped capital cost overruns was intended to partially protect Trans Mountain from the risk of a post-CPCN budget increase. It is possible that the 7 cents per \$100 million cost passthrough rate on a subset of project costs included sufficient cushion to protect Trans Mountain from falling short of its hurdle rate. Certainly, the NPV and IRR calculations show this not to be the case, but for greater certainty examining financial viability from a coverage of capital cost approach is useful.

300. Table 6 compares the Base Fixed Toll (which Trans Mountain has selected as the 15-year contract, light oil Edmonton to Burnaby, less than 75,000 barrels per day) to each \$100 million in project cost. The analysis is conducted on the \$5.4 billion, \$7.4 billion, \$30.9 billion, and \$34.5 billion budgets. Dividing the Base Fixed Toll into the capital cost results in a rate per \$100 million figure.

301. The initial capital cost of \$5.4 billion was covered with a Base Fixed Toll rate that reflects 8.1 cents per \$100 million in capital cost. By the time the current capital cost of \$34.5 billion is reached, the Base Fixed Toll reflects a rate of 3.3 cents per \$100 million.

¹³¹ \$7,418.3 million at CPCN. \$34,485 million current capital cost. Difference is \$27,066.7 million x .07 per \$100 million = \$18.95. $\$5.76 + \$18.95 = \$24.71$ The indicative toll represents the 15-year contract for <75,000 b/d from Edmonton to Burnaby. For a 20-year contract >75,000 b/d, a shipper receives a price that is 7.5% below the Indicative Toll based on volume over 75,000 barrels a day and a further 10% discount for a 20-year contract.

¹³² Trans Mountain, Response to CER Information Request No. 5, October 9, 2024, [A9D9W1](#), p.6, PDF p.7.

¹³³ 30% is derived by taking \$27.1 billion and dividing the shipper portion of \$8.1 billion by it. $8.1/27.1 = .30$

Table 6: Trans Mountain Base Fixed Toll for each \$100 million in Capital Cost

	Capital Cost (\$Millions)	Base Fixed Toll (\$)	\$ Rate per \$100 Million
Initial Capital Cost	5,370	4.33	.081
Increase to CPCN	2,048	1.43	.069
CPCN Capital Cost	7,418	5.76	.078
Increase to Application	23,482	5.12	.022
Application Capital Cost	30,900	10.88	.035
Increase to Current Capital Cost	3,585	0.58	.016
Current Capital Cost	34,485	11.46	.033

Figures are net of firm service fee. Initial Capital Cost and Indicative Fixed Toll [A3E7D5](#), PDF p. B1 and B3. CPCN and Application Capital Cost and CPCN and Application Indicative Fixed Toll [A8Q682](#), PDF p. 1 and 4. Current Capital Cost (as of October 4, 2024) and Indicative Fixed Toll [A9D9W1](#), PDF p. 4 and 6.

302. If Trans Mountain was assessed as having a Tolling Methodology that delivered just and reasonable rates at 8.1 cents per \$100 million of capital cost, it is not consistent to conclude that this methodology delivers just and reasonable rates at 3.3 cents per \$100 million of capital cost.
303. This significant deviation from the NEB’s previous determination is amplified, given the range of evidence pointing to the violation of fundamental tolling principles, as well as the unreliability of Trans Mountain’s Base Case.
304. The cash flow reflected in 7 cents per \$100 million for total project cost was and should continue to be Trans Mountain’s risk premium that is necessary to protect it against risks that have yet to materialize—risks that have yet to cause Trans Mountain financial harm.
305. At a Base Fixed Toll of \$24.71 per barrel, committed shippers would provide approximately \$5.5 billion in revenue for the first full year of service.¹³⁴ Compared to Trans Mountain’s Base Case of \$2.6 billion from the first full year of committed revenue this is shortfall of \$2.9 billion.
306. Trans Mountain negotiated a Tolling Methodology in 2012 that delivered revenue in the first full year of service that amounted to 17.9% of project cost. In 2017, it had agreement from shippers to pay tolls in the first year that delivered revenue amounting to 17.3% of project cost.
307. For roughly the same ratio to hold today, the first-year Base Fixed Toll would need to be \$24.71 per barrel, which translates to 16% of project cost. Instead, the shippers have

¹³⁴Base Fixed Toll is not directly comparable to the anticipated weighted average fixed toll Trans Mountain uses to forecast revenue. In Quantitative Financial Outlook 4.1b.1 for 2024 Trans Mountain expects the weighted average fixed toll to be \$9.88 per barrel delivering \$2.6 billion in revenue. The Base Fixed Toll of \$11.46 is 16% higher. Adjusting for a weighted average toll relative to a Base Fixed Toll of \$24.71 results in a weighted average toll of \$21.30. Revenue required for the first full year of operation is \$5.5 billion. Calculation: Committed 707,500 x Weighted Average \$9.88 x 365 = \$2,551,386,500. 707,500 x Weighted Average \$21.30 x 365 = \$5,500,458,750.

benefited from a Base Fixed Toll reduction of \$13.25 per barrel and their first-year toll revenue represents only 7.4% of project cost.¹³⁵

308. This toll analysis shows how shippers were willing to pay 100% of the project cost at 8.1 cents per \$100 million in 2012, and they were willing to pay 100% of the project cost at 7.8 cents per \$100 million at CPCN in 2017, but they could now pay less than 50% of the cost at 3.3 cents per \$100 million, and their correspondence in this hearing indicates that they are seeking to pay even less by reducing the toll further.

3.12 Tolling Methodology gives rise to a toll subsidy

309. If a pipeline user pays less for a service than the cost to provide it, the user receives a toll subsidy. This outcome distorts market signals, negatively impacts market competition, and erodes market efficiency.

310. Trans Mountain defined ‘subsidy’ at its hearing for Firm Service to the Westridge Dock RH-2-2011. Trans Mountain was concerned then that dock shippers were paying more than the cost of service and a refund of this revenue to all shippers—land and dock— would amount to a subsidy. Trans Mountain stated “when you compare the revenue versus the costs, we conclude that they’re paying too much relative to their costs. And then if they’re paying too much, where is it going? It’s going to the other shippers so that amounts to a subsidy.”¹³⁶

311. Trans Mountain’s definition of subsidy is applicable to this situation where instead of paying too much relative to their costs, shippers are paying too little. If they are paying too little, where is it coming from? It’s coming from Trans Mountain, so that amounts to a subsidy.

312. The issue is that Trans Mountain is charging tolls that are less than a private sector firm would charge. A private sector firm would be compelled to generate revenue sufficient to cover its operating and capital costs and its risk—its return. Trans Mountain’s Tolling Methodology is unable to deliver tolls that achieve that result, so shippers who use the pipeline receive the benefit of a toll reduction below what a private sector competitive firm would need to charge. This is a subsidy.

313. Trans Mountain’s committed shippers are not paying their fair share under the Fair Return Standard or the Cost Based/User Pay Principle. They are receiving a significant subsidy.

314. Beyond the market definition of a subsidy, the toll shortfall is also a subsidy under the broader definition of public subsidies. Trans Mountain is a Crown Corporation subject to the

¹³⁵ Trans Mountain’s Base Fixed Toll has been adjusted to reflect an estimate of the weighted average to estimate annual toll revenue coverage of capital cost. See Technical Appendix 3.6 for calculations.

¹³⁶ Trans Mountain Pipeline ULC, Firm Service Application, Transcripts Volume 2, August 23, 2011, [A2C3Z0](#), para. 2760, PDF p. 148.

Government of Canada's Inefficient Fossil Fuel Subsidies Framework.¹³⁷ Under that framework, the committed shippers' toll subsidy is a fossil fuel subsidy.

315. The Government of Canada's Inefficient Fossil Fuel Subsidies Framework defines subsidy by reference to the World Trade Organization's (WTO) definition of a "Subsidy" as set out in Article 1.1 of the Agreement on Subsidies and Countervailing Measures (ASCM).¹³⁸

316. Not only is Trans Mountain's Tolling Methodology a subsidy under Canada's framework and the WTO, the Government of Canada's funding for Trans Mountain under subsidized terms and conditions and the loan guarantee for the Syndicated Loan also fall within the definition of subsidy.

3.13 Cost of Service as a lower bound benchmark

317. Until the mid-1990s, the main method for Canadian toll regulation was through a Cost-of-Service methodology:

“Under this cost-of-service approach, a pipeline company's tolls are set so investors can recover costs and earn a reasonable return on their investment. To set tolls, most companies forecast their cost of service and throughput for a forward test year(s). The cost of service is made up of operating expenses, depreciation, return on capital, and income and other taxes. We allow a pipeline company the opportunity to earn an approved rate of return.

In determining the rate of return, we consider whether:

- the pipeline can attract capital on reasonable terms and conditions
- the allowed return is comparable to the return available to other companies of similar risk
- the financial integrity of the regulated pipeline will be maintained.”¹³⁹

318. A Cost-of-Service approach is a risk-free approach from the perspective of the pipeline operator. It delivers certainty of returns adjusted according to realized events—adjusted according to actual financial performance. Financial obligations are accommodated, and tolls are charged that reflect adherence to the Fair Return Standard.

319. The Commission has supported the use of Negotiated Settlements since the mid-1990s to improve the effectiveness of the regulatory process, reduce costs and allocate those cost

¹³⁷ Government of Canada, [Inefficient Fossil Fuel Subsidies Government of Canada Self-Assessment Framework](#). For a fuller discussion of how the toll subsidy satisfies the Inefficient Fossil Fuels Subsidies Framework see Dr. Thomas Gunton, [Assessment of Fossil Fuel Subsidies in Canada, A case study of the Trans Mountain Pipeline](#), IISD Report, September 2024

¹³⁸ World Trade Organization, Agreement on Subsidies and Countervailing Measures, [Part 1](#), General Provisions, Article 1, Definition of a Subsidy.

¹³⁹ Canada Energy Regulator, [Regulation of Pipeline Traffic, Tolls and Tariffs](#), February 12, 2021.

savings between the carrier and its shippers.¹⁴⁰ “Negotiated settlements are regarded by the Board as an opportunity for interested parties to resolve issues without resorting to a hearing process”¹⁴¹ as would be required when the approach relied on is Cost-of-Service.

320. Trans Mountain’s Tolling Methodology is not a Cost-of-Service methodology. Trans Mountain’s Tolling Methodology is a Negotiated Settlement that was intended to provide a market-based return to Trans Mountain which would deliver tolls higher than those under a Cost-of-Service approach. “The applied-for toll methodology is essentially a negotiated agreement allocating risk among parties, which includes gives and takes.”¹⁴² “...the tolls were negotiated using a **market-based approach...**”¹⁴³ (Emphasis added.)
321. A traditional Cost-of-Service methodology applied to Trans Mountain is effectively a risk-free analysis since Cost-of-Service is based on actual results not forecast results. The terms of Trans Mountain’s negotiated settlement are fixed for 20 years, and hence Trans Mountain’s tolls were intended to cover the risk inherent in its 20-year forecast.
322. A Cost-of-Service methodology assumes the company has a capital structure of 55% debt and 45% equity. Trans Mountain’s capital structure is currently 78% debt and 22% equity.¹⁴⁴
323. A Cost-of-Service Methodology, through the treatment of depreciation, also considers a time horizon reflecting the expected life of the project. For Trans Mountain this means return of capital as measured through depreciation expense would be expected to be achieved over the project’s 35-year life not the 20-year life of the contracts.¹⁴⁵
324. As Trans Mountain’s expert Mr. Reed explained during RH-001-2012, assuming that all remaining costs will be recaptured once contracts expire is “an absolutely heroic assumption.”¹⁴⁶ Extending the evaluation of cost recovery beyond the 20-year contract life to include the life of the project, as would be the case with Cost-of-Service, is inadvisable. “There will be billions of dollars of investment remaining unamortized at that period of time for which you have no assurance of cost recovery.”¹⁴⁷ Trans Mountain’s Base Case estimates that upon contract termination net rate base will be \$20.3 billion with no assurance of cost recovery.¹⁴⁸
325. The revenue requirement estimated under a Cost-of-Service approach would be considered a lower bound because revenue is determined on an annual basis when costs are

¹⁴⁰ Canada Energy Regulator, Reasons for Decision, Alliance Pipeline Ltd. as General Partner of Alliance Pipeline Limited Partnership, RH-002-2014, [A71142](#), page 42, PDF p. 56.

¹⁴¹ National Energy Board, [Revised Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs](#), June 12, 2002.

¹⁴² *Supra* n.1, [A51913-1](#), p.26, PDF p.38.

¹⁴³ Trans Mountain, Executive Report, May 5, 2021, [PS CPM 1.09\(a\) 00021](#), PDF p. 29.

¹⁴⁴ Trans Mountain, Response to CER IR No.4.1, [Attachment 4.1-2 Quantitative Financial Outlook](#), 4.1b.1, line 31, p. 14, PDF p. 14.

¹⁴⁵ *Supra* n. 126, Trans Mountain Pipeline ULC, 2024 Depreciation Study, [A9D714](#).

¹⁴⁶ Trans Mountain, Part IV, RH-001-2012, Transcripts, Volume 2, [A3F4W5](#), para. 1873, PDF p. 42.

¹⁴⁷ *Ibid.*

¹⁴⁸ Trans Mountain’s Base Case, [CER 1.4 b.1](#), line 29, PDF p.14.

known and uncertainty and risk have been removed, and assets are depreciated over a time horizon greater than the life of the contracts.

326. Notwithstanding Trans Mountain's Tolling Methodology being achieved through a Negotiated Settlement, Trans Mountain has confirmed that it considers a Cost-of-Service approach as a useful lower bound revenue requirement benchmark. "A cost of service methodology is relevant to the determination of Project returns given the NEB's oversight of transportation rates. In Trans Mountain's view, cost of service represents the lowest returns possible and therefore "sets the floor.""¹⁴⁹
327. During RH-001-2012, Trans Mountain provided analysis comparing first-year tolls from its Tolling Methodology to the tolls that would be required under a Cost-of-Service approach.¹⁵⁰ As would be expected Trans Mountain's Tolling Methodology, with full capital cost recovery at that time, resulted in tolls that exceeded those that would be determined by a Cost-of-Service approach.
328. In 2012, the Base Fixed and Variable Toll for the first full year of service under the negotiated Tolling Methodology was \$4.74 per barrel, an estimated \$1.11 per barrel higher than the toll of \$3.63 determined under a Cost-of-Service approach.¹⁵¹ That is, the Base Fixed and Variable Toll for light oil delivery from Edmonton to Burnaby determined by the Tolling Methodology toll was 31% higher than the toll estimated by Trans Mountain under a Cost-of-Service approach.
329. In 2012, Trans Mountain's Tolling Methodology produced a Base Fixed and Variable Toll that was 31% higher than the toll delivered by a Cost-of-Service methodology satisfying the expectation Cost-of-Service would represent a benchmark floor.
330. Trans Mountain has provided a forecast of its revenue requirement and corresponding tolls for 2024 and 2025 under a Cost-of-Service approach.¹⁵² Since only 45% of the \$34.5 billion project cost is expected to be recovered through tolls determined by the methodology it would be expected that the tolls generated by the Tolling Methodology would be significantly lower than those that would be determined by a Cost-of-Service methodology.

¹⁴⁹ Trans Mountain, Trans Mountain Expansion Project: Cost, Schedule and Readiness Review, Corporation Board of Directors, June 12, 2019, ATIA 01-0004-2019, p. 51.

¹⁵⁰ Trans Mountain Expansion Toll Methodology Hearing, Information Request Response to CAPP IR 3(c) Appendix 1, January 10, 2013, [A3E7F5](#).

¹⁵¹ *Ibid.*, p.1, Edmonton to Burnaby Light Oil 15 year <75,000 barrels a day. The figures in this document for fixed and variable tolls under the Tolling Methodology are slightly different than the figures in A3E7D5 Revised FSA TSA Schedules, although both documents have the same filing date. Since Tolling Methodology and Cost-of-Service comparisons are provided in CAPP IR 3 (c) these are the figures relied on for this discussion. The figures in the FSA TSA Schedules would reduce the Tolling Methodology Fixed and Variable Indicative Toll by 7 cents and thus the Cost-of-Service Toll would be \$1.04 per barrel less than the Tolling Methodology.

¹⁵² Trans Mountain, Quantitative Financial Outlook CER 4.1 b-1, Response TWN Motion to Compel 2.1 (d), [A9F3D8](#), PDF p.3.

The Cost-of-Service tolls scenario with no uncommitted capacity utilization has been used since this is more reflective of throughput experience for 2024 than Trans Mountain's Base Case.

This is the case. The Base Fixed and Variable Toll under the Tolling Methodology is 33% lower than that which would be determined by Cost-of-Service in 2024.

331. The Edmonton to Burnaby estimated toll under Cost-of-Service for 2024 is \$16.00¹⁵³ whereas the Base Fixed and Variable under the Tolling Methodology is \$12.04.¹⁵⁴ The Tolling Methodology Base Fixed and Variable toll is \$3.96 per barrel lower than the Cost-of-Service toll. The Cost-of-Service methodology delivers an Edmonton to Burnaby toll that exceeds the Tolling Methodology Base Fixed and Variable Toll by 33%. Cost-of-Service does not represent a benchmark floor.
332. The revenue requirement under a Cost-of-Service approach for the first 8 months of Trans Mountain's operation is estimated by Trans Mountain to be \$2,762 million.¹⁵⁵ Trans Mountain's Tolling Methodology is expected to deliver revenue of \$1,796 million including variable toll revenue. The revenue shortfall during the first 8 months of operation under the Tolling Methodology as compared with a Cost-of-Service approach is therefore \$966 million.
333. The revenue generated by the Tolling Methodology in the first 20 months of operation falls \$2.4 billion short of the revenue that would be required under a Cost-of-Service approach.
334. On a per barrel average basis, tolls determined by the Tolling Methodology for the first 20 months of operation are \$5.66 per barrel lower than determined under a Cost-of-Service methodology.¹⁵⁶
335. Even if Trans Mountain's tolls were brought in line with the Cost-of-Service level and generated an additional \$2.4 billion by year end 2025, this would not remove the risk Trans Mountain is exposed to over the remaining 18-year life of the contracts.
336. An important reason why a Cost-of-Service approach would be considered to represent a "floor" is due to its annualized reconciliation. When costs are known and revenue required is based on those known costs annually, the risk of expected but unknown costs is removed and hence required return as reflected in the CER's approved rates is lower than it otherwise would need to be.
337. A second major reason Cost-of-Service represents a floor is due to the underlying assumption that the time horizon for return of capital is consistent with the depreciated life of the underlying assets. However, there is significant risk inherent in assuming that once the

¹⁵³ Trans Mountain, TWN Motion Update Attachment 2.3(t), [A9F3D8](#), PDF p.3,

¹⁵⁴ \$12.04 is calculated using the Base Fixed Toll of \$11.46 provided in CER IR No.5, and the Variable Toll of \$0.58 from the Application [A8Q6A3](#), p.3, PDF p.4. $\$11.46 + .58 = \12.04 .

¹⁵⁵ \$17 million has been added to Trans Mountain's estimate of \$2,745 million as the payment to the Province of BC does not appear to have been included in the revenue requirement. See Technical Appendix 3.7 for calculation of the figures used in this section.

¹⁵⁶ See Technical Appendix 3.7 for greater detail on the calculation of the shortfall.

contracts expire there will be sufficient demand for Trans Mountain's capacity at tolls which would be required under Cost-of-Service.

338. Unfortunately, extrapolating Cost-of-Service forward over a 20-year period and comparing that to Trans Mountain's Quantitative Financial Outlooks would not provide greater insight into how much of a risk premium is required. A Cost-of-Service comparison allows the Commission to evaluate the Tolling Methodology and whether it is just and reasonable only in the short term.
339. We can conclude from the Cost-of-Service information provided by Trans Mountain that the company is already involved in a serious process of catch up. Whether Trans Mountain can be expected to recover significant losses in the early years of the shipper contracts with its forecast profits over the course of the latter years of the shipper contracts cannot be gleaned from a Cost-of-Service approach. However, NPV, IRR and Cost Based/User Pay analysis indicates Trans Mountain cannot.
340. In summary, a Cost-of-Service approach for determining revenue requirement each year reflects realized cost accommodation—it allows for uncertainties that have manifest—while Trans Mountain's Quantitative Financial Outlooks do not.
341. Alternatives or modifications to the Tolling Methodology that would see the adoption of a Cost-of-Service approach and require annual adjustment to tolls based on actual results would solve this problem.
342. However, it is not recommended that Trans Mountain's tolls be determined on a Cost-of-Service basis, but rather the Tolling Methodology be adjusted to better allocate project cost and potential operating risk among the parties.
343. The Cost-of-Service approach as a comparison to the Tolling Methodology has been offered to indicate how far Trans Mountain has fallen short of a minimum return standard in the immediate term. As mentioned above this comparison would be misleading and uninformative if applied over a longer-term time horizon because Cost-of-Service assumes risk will be accommodated as it materializes, while Trans Mountain's Quantitative Financial Outlooks, especially Trans Mountain's Base Case, effectively ignore risk exists.
344. Trans Mountain's Base Case Scenario is a Best-Case Scenario where risks do not materialize, where 'nothing goes wrong'. In contrast, a Cost-of-Service approach applied annually is a case of 'when it goes wrong, costs get recovered in the tolls.'

4. ARE ALTERNATIVES OR MODIFICATIONS WARRANTED?

345. List of Issues 3 asks "Whether alternatives or modifications to the RH-001-2012 Tolling Methodology are warranted, including based upon consideration of:

- a. The potential implications for Trans Mountain’s financial position related to the level of Trans Mountain’s tolls; and
- b. The potential market impacts related to the level of Trans Mountain’s tolls.”¹⁵⁷

346. Trans Mountain’s negotiated Tolling Methodology is unable to provide sufficient revenue to allow Trans Mountain to meet the Fair Return Standard. Alternatives or modifications are warranted. The tolls charged to shippers who use the system need to increase if Trans Mountain’s financial integrity is to be protected.

347. Trans Mountain’s Tolling Methodology leads to tolls that have been shown:

- i) through NPV and IRR analysis to fall short of a minimum standard 11% of market determined return over the life of the contracts;
- ii) through a Cost Based/User Pay approach to deliver tolls that fall far short of Trans Mountain’s risk-based requirement of 7 cents per \$100 million in capital cost; and
- iii) through a Cost-of-Service comparison to fall short of a minimum acceptable level in the short term.

348. The risks Trans Mountain is exposed to over the life of the predetermined toll levels has not been adequately considered or accommodated in its Quantitative Financial Outlooks. Trans Mountain Tolling Methodology is incapable of doing so.

349. The Tolling Methodology itself has become one of Trans Mountain’s significant risks. It does not allow Trans Mountain a reasonable opportunity to recover its costs over the life of the contracts or attract capital on reasonable terms and conditions.

350. Toll revenue that consistently falls short of covering Trans Mountain’s financial obligations leads to financial instability which impacts Trans Mountain’s ability to invest in necessary upgrades, innovations, and maintenance. This will hinder Trans Mountain’s ability to adapt to changing circumstances, respond to emergencies, or make long term investments that are of benefit to the shippers and by extension the industry and economy.

4.1 Potential implications for Trans Mountain’s financial position

351. The analysis presented in this report confirms that Trans Mountain’s Tolling Methodology needs to be altered or modified to deliver tolls that generate an increase in revenue over the life of the contracts of approximately \$20 billion more in revenue, in current dollars. This will:

- i) protect Trans Mountain from the risks it faces;

¹⁵⁷ *Supra* n.10, [A8T3R6](#).

- ii) provide Trans Mountain with sufficient resiliency to allow it to earn a market return, meet its obligations, continue as a going concern, and attract capital; and
- iii) ensure shippers who use the system pay for it.

4.2 Potential market impacts

352. List of Issues 3 asks whether alternatives or modifications to the RH-001-2012 Tolling Methodology are warranted, including consideration of the potential market impacts related to the level of Trans Mountain's tolls.
353. The tolls determined under the Tolling Methodology represent a significant subsidy for the benefit of committed shippers. Trans Mountain's toll subsidy has negative market consequences because toll subsidization distorts market signals and creates inefficiencies.
354. Alternatives or modifications to the tolling methodology to allocate approximately \$20 billion more in costs so shippers who use the system pay for its expansion will remove the negative market consequences that occur when tolls are significantly below the cost of providing transport services.
355. The incentive under a system of heavily subsidized tolls is for producers to expand production, supply more crude oil than would otherwise be supplied, inefficiently increases the demand for additional pipeline capacity and contribute to global warming and climate change at a rate greater than what a healthy, efficient, market would support.
356. Increasing tolls to generate approximately \$20 billion in additional revenue is not expected to have a materially negative impact on the market. It is expected to improve the functioning of the market.
357. Although detrimental market impacts are not anticipated with a Tolling Methodology that results in tolls that meet the Fair Return Standard and satisfy the Cost Based/User Pay Principle over the life of the contracts, even if oil producer market behaviour were to be negatively impacted, this would not be sufficient reason to hold tolls at uneconomic and financially unsound levels.
358. One or more of the significant risks Trans Mountain has identified could fundamentally compromise Trans Mountain's ability to continue to operate as a going concern. The financial failure of the company, or the huge financial support that would be required to keep it going, would have a more detrimental market impact than ensuring the Tolling Methodology prepares for and protects against this outcome.
359. Trans Mountain and several of its shippers have claimed that the market benefits from the pipeline far exceed the direct benefit of the expanded capacity available to ship crude oil and refined products along it. Although the myriad of benefits advanced by market participants

are not necessary to support modifications or alterations to Tolling Methodology so that it can satisfy the Fair Return Standard and Cost Based/User Pay Principle, they are further reason to conclude that significantly raising tolls will not have a materially negative impact on market behaviour.

360. Trans Mountain’s evidence assumes that the tolls determined under the Tolling Methodology will not negatively impact the market because they are sunk costs. “Since much of the contract toll is in effect a sunk cost for the contract shippers, the incremental cash cost to ship on the Expanded System is low for the contract shippers. Therefore, it is reasonable to project that the level of the Expanded System contract tolls will not materially influence the contract volume shipped. Accordingly, the level of the Expanded System contract toll does not have significant market impacts, because it does not materially influence market behavior, i.e., the volume shipped by contract shippers on the Expanded System.”¹⁵⁸
361. Trans Mountain’s expert, Mr. Neil Earnest’s conclusion is based on a narrow interpretation of the market. The market is more than the toll’s impact on committed shippers’ supply of product to the pipeline.
362. Mr. Earnest fails to consider the impact toll rates have on the cash flow of individual shipper operations and how that might impact the overall supply of crude oil and refined products delivered to market and the demand for alternative pipeline and rail egress options. Cash flow impact from toll rates is an important consideration when assessing market impact.
363. The reason an increase in tolls is not expected to negatively impact the supply of crude oil and refined products or the demand for transportation capacity is because of the cash flow benefits that Trans Mountain and many of the shippers say have occurred because of Trans Mountain’s expansion. These benefits include a narrowing of the light to heavy price differential, less volatility in the determination of oil pricing, expanded access to global markets and global pricing.
364. Trans Mountain’s expert Mr. Reed indicates that the market value of Trans Mountain’s access to the Pacific market is significant and that lifting the constraint would provide major benefits for Canada’s oil producers. “These values (paid through Westridge Dock bid premia) indicate the premium nature of the Pacific market for Canadian crude, which currently suffers from capacity constraints getting to tidewater in either the U.S. Gulf Coast or the Pacific. These constraints have contributed to a disadvantage for West Canada Select (“WCS”) relative to West Texas Intermediate (“WTI”) crude prices of more than \$25/bbl as recently as November 2023. Lifting those constraints clearly has major benefits for Canada’s oil producers.”¹⁵⁹
365. Major market participants claim the expansion has narrowed the WTI-WCS differential, thereby increasing revenue realized. According to these market participants, revenue

¹⁵⁸ *Supra n.9*, [Market Impact of Expanded Trans Mountain Tolls](#), p. 5, PDF p. 190.

¹⁵⁹ Trans Mountain Pipeline ULC, Additional Written Evidence, Evidence of Concentric Energy Advisors, John Reed, Appendix 1, December 2023, [A8V3CO](#), pp. 12-13, PDF pp. 15-16.

improves not only on the barrels shipped along Trans Mountain, but on every barrel they produce.

366. The narrowing of the differential and the financial gain it is said to represent, if correct, allows for an enhancement to the financial prospects of all parties involved—Trans Mountain, the committed shippers, and producers who do not use Trans Mountain.
367. The committed shippers can pay for the pipeline over the life of their contracts and still be better off than if the pipeline had not been built, even though the cost has risen to \$34.5 billion.
368. For example, Cenovus Energy is a diluted bitumen producer currently producing 615,000 – 635,000 barrels a day¹⁶⁰ and is a Trans Mountain committed shipper with 144,000 barrels a day of capacity. Cenovus recently informed its shareholders that Trans Mountain’s expansion has delivered significantly improved revenues. “The third quarter was also the first full period of operations of the TMX pipeline, which has provided additional egress capacity and access to new global markets for our crude. This has had a positive impact not only for Cenovus, but for the whole Canadian economy. We are seeing the benefits of a narrow, less volatile WCS differential, which strengthens the realized price for all Canadian oil production.”¹⁶¹
369. Cenovus’ Management Discussion and Analysis (MD&A) provides further insight into the magnitude of the gain Cenovus says Trans Mountain has delivered. The MD&A provides the WTI to WCS at Hardisty differential. The differential narrowed by \$2.08US per barrel for the first 9 months of 2024 from \$17.57US per barrel to \$15.49US per barrel.¹⁶² On an annualized basis this would generate an increase in cash flow of approximately \$475US million for Cenovus over what would have occurred if Trans Mountain had not been expanded.¹⁶³ The narrowing of the discount reported by Cenovus represents an annualized gross benefit to Cenovus of approximately \$675 million (at an exchange rate of 1.44 Canadian to US) because Trans Mountain was expanded.
370. Cenovus is experiencing additional benefits from the expansion including access to new and allegedly higher priced markets and the opportunity to expand production beyond what would have occurred if Trans Mountain had not been built.
371. Imperial Oil chairman, president and CEO Brad Colson has confirmed with shareholders that the benefits of the expansion extend beyond the provision of additional export capacity. “And with TMX in operation, we’re seeing the value of additional egress in narrower and more stable differentials that provide a significant net benefit to Imperial.” Mr. Colson explained further during the analyst call that, “Overall, I think it’s a great story for industry that TMX has now been started up. We have more egress capacity from the basin, you know, through Enbridge and through TMX. The producers are all leveraging that to move their

¹⁶⁰ Cenovus Energy, [Corporate Guidance](#), 2025.

¹⁶¹ Cenovus, [Third Quarter Earnings Call](#), Thursday, October 31st, 2024, PDF p. 3.

¹⁶² Cenovus, [Management Discussion and Analysis](#), For the period ended September 30, 2024, PDF p.11

¹⁶³ $625,000 \times 365 \times \$2.08\text{US} = \$474,500,000$.

products, to what they see as the highest value markets. And they have more flexibility. And that also has provided stability to the market, such that we are now seeing a narrower WCS differential and we're seeing that differential be more stable. So I think it's a great result for Canada. It's a great result for our industry, and it's a great result for Imperial and it has contributed to the earnings I've just announced.”¹⁶⁴

372. Canadian Natural Resources Limited (CNRL) is committed to ship 169,000 barrels per day on Trans Mountain. The company echoes the sentiment of other major committed shippers regarding the myriad of financial benefits they receive from Trans Mountain’s expansion. “The efficient commissioning of the Trans Mountain Expansion ("TMX") pipeline during Q2/24 and the positive impact this incremental egress has on the Canadian economy represents a significant achievement for all Canadians. The impact on the energy industry has been positive with narrowing of heavy oil differentials, improved realized pricing along with the development of a more diverse market for western Canadian crude oil. TMX is a significant accomplishment for Canada, adding much-needed egress capacity and increasing exposure to global market pricing for crude oil products.”¹⁶⁵
373. Increased capacity from Trans Mountain has improved market efficiency. Enbridge Inc. reduced tolls on its Mainline System for uncommitted heavy crude barrels by 10% or about \$1US per barrel effective September 1, 2024.¹⁶⁶
374. It is within a market reality of all the direct and indirect financial benefits the expansion has delivered to oil product shippers that the Tolling Methodology needs to be subjected to revision or renegotiation. Oil product shippers need Trans Mountain’s expansion, and the unquantifiable and quantifiable market benefits they receive appear to exceed its cost. Trans Mountain can be made whole while the shippers are still better off than if the project had not been built.
375. Notwithstanding the significant benefits shippers say they receive because Trans Mountain has been expanded, even should those benefits not exist, the Cost Based/User Pay Principle would have the shippers pay for the cost of the transportation services they receive.
376. It is very unlikely that any of the shippers would prefer an option where Trans Mountain ceases to operate as a going concern because it cannot meet its financial obligations. The pre-conditions exist for the parties to the contract to get in a room and work it out. If they are unable or unwilling to do so, then a return to Cost-of-Service may be the only viable option.

5.0 SUMMARY OF FINDINGS, OPINIONS AND CONCLUSIONS

377. An evaluation of Trans Mountain’s Tolling Methodology, the impact of the tolls the methodology delivers on Trans Mountain’s financial position, or the impact of the tolls on

¹⁶⁴ Imperial Oil Limited, [Q3 2024 Earnings Call Transcript](#), Friday November 1, 2024, pp. 3 and 11, PDF pp. 3 and 11.

¹⁶⁵ Canadian Natural Resources Limited, [Second Quarter Report](#), Three and Six Months Ended June 30, 2024, PDF p. 1.

¹⁶⁶ Enbridge Pipelines LLC, [CER No.556](#), Tariffs from Alberta to Texas, PDF p.8. and [CER No. 557](#), PDF p.8.

the market must recognize the nature and extent of the revenue shortfall that Trans Mountain's Quantitative Financial Outlooks rely upon.

378. A Net Present Value (NPV) and Cost/Based User Pay assessment puts the revenue shortfall of Trans Mountain's \$34.5 billion project in the range of \$20 billion, in current dollars.
379. Anticipated returns under an Internal Rate of Return (IRR) analysis indicates that returns have fallen from Trans Mountain's commercially required unlevered 12% - 15% to 3% - 4%. Trans Mountain's Tolling Methodology fails to meet the Fair Return Standard.
380. Nineteen billion dollars of project cost has not been passed through to shipper tolls. Trans Mountain bears more than half the cost of the project and relies on Government of Canada debt and equity financing and Government of Canada loan guarantees to do so. When shippers pay tolls that do not cover the cost of the service this represents a subsidy. When the shortfall is borne by the public purse this represents a public subsidy. Industry and public subsidies result in inefficient market outcomes and are not in the public interest.
381. Trans Mountain's Tolling Methodology does not allow the company to earn a market rate of return, achieve financial integrity, or attract capital. The Tolling Methodology delivers tolls that are too low. When tolls are too low this:
- i) puts sound integrity management and environmental protection decisions at risk;
 - ii) puts Trans Mountain's ability to meet its operating and financial obligations at risk;
 - iii) puts Trans Mountain's ability to continue as a going concern at risk; and
 - iv) heavily subsidizes shippers' tolls leading to distorted market signals and an overinvestment in heavy oil production leading to inefficient increased demand for pipeline capacity.
382. Trans Mountain prepared a Cost-of-Service revenue requirement and related tolls estimate for the first 20 months of the expansion's operation.¹⁶⁷ Analyzing Trans Mountain's information tells us that:
- i) the revenue generated by the Tolling Methodology in the first 20 months of the project's operation is expected to be \$2.4 billion less than the revenue requirement Trans Mountain estimates under a Cost-of-Service approach;¹⁶⁸ and
 - ii) this shortfall suggests that tolls during 2024 and 2025 are on average \$5.66 per barrel lower than what would be required under a Cost-of-Service approach.
383. Trans Mountain's Tolling Methodology does not pass the Fair Return Standard, the Cost Based/User Pay or Economic Efficiency Principles and delivers a toll subsidy.
384. An alternative or modified methodology that can weather a twenty-year time horizon is preferable to an annual tally of expenses and return.

¹⁶⁷ *Supra* n.21, [C32368-3](#).

¹⁶⁸ See Technical References Appendix 3.7, Cost of Service.

385. It is recommended that Trans Mountain and the committed shippers modify the Tolling Methodology with guidance from the CER to capture \$20 billion in current dollars over the life of the contracts. This guidance would allow Trans Mountain to generate enough of a financial cushion to forego regular monitoring of its financial integrity by the Commission.
386. The significant spillover benefits major market participants say they receive from improved market access, increased egress, narrowing of the WTI-WCS differential and expanded production provides a market driven rationale for redressing the failure of the Tolling Methodology through modification or re-negotiation. A market driven result can best serve the interests of all parties and reduce the need for significant and ongoing regulatory oversight.
387. Should Trans Mountain and the shippers be unable to come to a settlement that protects Trans Mountain's ability to meet the Fair Return Standard, then a return to a Cost-of-Service methodology with some averaging mechanism to mitigate the toll rate in the immediate term is a fallback position the Commission may wish to consider. This approach would require regular monitoring. Under the circumstances it is less desirable than a Negotiated Settlement that protects the interests of all parties as if they were all driven by commercial considerations.

Summary of Experience

Robyn Allan is an independent economist and has held many executive positions in the private and public sectors including President and CEO of the Insurance Corporation of British Columbia, Vice-President Finance for Parklane Ventures Ltd., and Senior Economist for BC Central Credit Union.

For the past thirty years Ms. Allan has been a consultant to business, government, and First Nations in the areas of energy, immigration, business development and housing. Ms. Allan was the Economic and Financial Advisor to the Barrett Commissions of Inquiry into the Quality of Condominium Construction in British Columbia 1998 – 2000.

Ms. Allan has taught Money and Banking, Public Finance and Micro and Macro Economics at the University of Regina and Kwantlen College. She has also written numerous articles on energy, business and economics for newspapers and magazines including the Globe and Mail, National Observer, The Tyee, Vancouver Sun, Calgary Herald, Edmonton Journal, Financial Post, Toronto Star, Business in Vancouver, and Enterprise Magazine.

Recent Experience and Reports

Peer Reviewed Article: Years late and millions short: A predictive audit of economic impacts for coal mines in British Columbia, Canada, Environmental Impact Assessment Review, Rosemary Collard, Jessica Dempsey, Bruce Muir, Robyn Allan, Abigail Herd and Peter Bode, February 2023.

Report: Trans Mountain: Compromised viability to cost taxpayers more than \$17 billion, West Coast Environmental Law, October 2022.

Expert Witness including preparation of two Expert Reports: BC Supreme Court, Saik'uz First Nation and Stellat'en First Nation v. Rio Tinto Alcan Inc., her Majesty the Queen in Right of Canada, and the Province of British Columbia, 2021.

Peer Reviewed Report: Who Benefits from Caribou Decline?, Canadian Centre for Policy Alternatives, Robyn Allan, Peter Bode, Rosemary Collard and Jessica Dempsey, December 2020.

Financial Advisor: estimated valuation of a private company engaged in the production of food products and assisted in the negotiation of a successful sale to a major retailer. Spring 2020.

Expert Intervenor: BC Utilities Commission, Inquiry into Gasoline and Diesel Prices in British Columbia, 2019

Report: The Case for Regulatory Oversight to Address Market Failure, Robyn Allan and Marc Eliesen, prepared for the BCUC Inquiry into Gasoline and Diesel Prices in British Columbia, June 27, 2019.

Report: Need for, Commercial Feasibility, and Economic Impact of the Trans Mountain Expansion Project, prepared for Tsleil-Waututh Nation, November 25, 2016.

Expert Intervenor: Application for the Trans Mountain Expansion Project, OH-001-2014, Part III Hearing, National Energy Board.

Report: Toward Financial Responsibility in British Columbia's Mining Industry, prepared for BC Union of Indian Chiefs, May 2016.

Report: Canadian Ship-Sourced Spill Preparedness and Response—An Assessment, submitted to the Tanker Safety Expert Panel Review, June 2013.

Report: An Economic Assessment of Northern Gateway, prepared for the Alberta Federation of Labour, January 2012.

Expert Witness: Application for the Enbridge Northern Gateway Pipeline Project, Alberta Federation of Labour, National Energy Board Part III Review, 2011.

Economic and Financial Advisor to Fox Lake Cree Nation in negotiations with Manitoba Hydro on the Conawapa Generating Station Power Project.

Economic and Financial Advisor to International Power Development Group regarding Keeyask Generating Station.

Executive Positions

- President and CEO, Insurance Corporation of British Columbia (ICBC)
- Vice-President Finance, Parklane Homes
- Executive Director, Vancity Community Foundation
- Senior Economist, BC Central Credit Union
- Manager Auto Insurance, Saskatchewan Government Insurance (SGI)
- Capital Budget Analyst, Crown Investments Corporation (CIC)
- Executive Director, Choreographer and Dancer, Vancouver Dance Theatre

Board Positions

- Samoth Capital Corporation
- Dynasty Motor Car
- Vancouver Opera

- Ballet BC

Education

- Bachelor of Arts Degree UBC 1976
- Master of Arts Degree UBC 1978
- Successful completion of the first year of the Certified Financial Analyst (CFA)
- Canadian Securities Institute (Honours)

Articles

Numerous articles written for Globe and Mail, National Observer, Vancouver Observer, Vancouver Sun, Times Colonist, Edmonton Journal, Toronto Star, Calgary Herald, The Tyee, Financial Post, Business in Vancouver, and Enterprise Magazine.

I, Robyn Allan, of British Columbia, Canada, have been engaged on behalf of Tsleil-Waututh Nation, to provide evidence in relation to the Canada Energy Regulator hearing on Trans Mountain Pipeline ULC's Application for Interim Commencement Date Tolls and Other Matters related to the Transportation of Petroleum on the Expanded Trans Mountain Pipeline System RH-002-2023.

In providing evidence in relation to the above-noted proceeding, I acknowledge that it is my duty to provide evidence as follows:

1. to provide evidence that is fair, objective, and non-partisan;
2. to provide evidence that is related only to matters within my area of expertise; and
3. to provide such additional assistance as the tribunal may reasonably require to determine a matter in issue.

I acknowledge that my duty is to assist the tribunal, not act as an advocate for any particular party. This duty to the tribunal prevails over any obligation I may owe any other party, including the party on whose behalf I am engaged.

Date: January 24, 2025

Signature:



Appendix 3

Technical References

3.1 Net Present Value

Table 3.1-1

Trans Mountain Base Case Present Value Capital Invested 11% Discount Rate
(\$Millions)

	2018	2019	2020	2021	2022	2023	Q1 2024	Net Present Value
EBITDA	60	194	188	181	187	189	36	
Capital Cost	4678	1057	3131	4962	8467	8905	930	
Net Cash Flow	-4618	-863	-2943	-4781	-8280	-8716	-894	
PV Net Outflow	-8070	-1359	-4174	-6109	-9531	-9038	-894	-\$39,174
PV Net Inflow								\$21,132
Net Present Value								-\$18,042

Source: Trans Mountain Corporation Financial Statements 2018-2023, Q1 2024 plus one month estimate for April.

Errors due to rounding.

Total PV of Cash Inflow for Base Case from Trans Mountain Response to [TWN Table 2.3-2](#), PDF p. 28.

Reproduced below.

Table 3.1-2

Trans Mountain Delayed Spot Utilization Present Value Capital Invested 11% Discount Rate
(\$Millions)

	2018	2019	2020	2021	2022	2023	Q1 2024	Net Present Value
EBITDA	60	194	188	181	187	189	36	
Capital Cost	4678	1057	3131	4962	8467	8905	930	
Net Cash Flow	-4618	-863	-2943	-4781	-8280	-8716	-894	
PV Net Outflow	-8070	-1359	-4174	-6109	-9531	-9038	-894	-\$39,174
PV Net Inflow								\$18,871
Net Present Value								-\$20,303

Source: Trans Mountain Corporation Financial Statements 2018-2023, Q1 2024 plus one month estimate for April.

Errors due to rounding.

Total PV of Cash Inflow for Slower Uptake of Spot Utilization from Trans Mountain Response to [TWN Table 2.3-2](#), PDF p. 28. Reproduced below.

Table 2.3-2: PV Cash Flow

	Discount Rate	PV Cash Flow Excluding Debt Service (\$ millions)	PV Cash Flow Including Debt Service (\$ millions)
CER 4.1 b.1	7.88%	\$26,706	\$6,184
CER 4.1 b.1	11.0%	\$21,132	\$4,082
CER 4.1 b.2	7.88%	\$25,996	\$5,515
CER 4.1 b.2	11.0%	\$20,512	\$3,580
CER 4.1 b.3	7.88%	\$24,123	\$3,720
CER 4.1 b.3	11.0%	\$18,871	\$2,307

The risk inherent in Trans Mountain's outlooks and the asymmetrical burden the operator faces is one of the major reasons the financial evaluation Trans Mountain conducted during RH-001-2012 relied on the life of the contracts, not the life of the pipeline. There is a significant amount of uncertainty regarding the demand for the pipeline's capacity post 2044 and for consistency with how Trans Mountain evaluated its ability to make a reasonable return, the NPV and IRR analysis conducted in the report relies on the life of the contracts.

3.2 Internal Rate of Return

Table 3.2-1

IRR Data		
Year	Base Case	Scenario 3
2024	-38111	-38109
2025	2296	1848
2026	2564	2105
2027	2630	2159
2028	2701	2217
2029	2766	2270
2030	2826	2318
2031	2893	2372
2032	2807	2433
2033	2718	2489
2034	2752	2923
2035	2792	2862
2036	2841	2841
2037	2883	2883
2038	2928	2928
2039	3009	3009
2040	3087	3087
2041	3142	3142
2042	3199	3199
2043	3261	3261
2044	1082	1082
IRR	3.77%	2.87%

2024 Year End Balance is the Present Value of the capital invested plus the Cash Available for Debt Service (line item 42) in Base Case 4.1b.1 and 4.1b.3. Unlevered IRR

Annual Cash Inflows are from Cash Available for Debt Service (line item 42) in Base Case 4.1b.1 and 4.1b.3.

January – April 2044 as partial year does not impact the results as the IRR's are the same (to two decimal points) if those cash returns are included in 2043.

3.3 Trans Mountain's Debt Obligations

TMP Finance Canada Account Loan Balance from CDEV [Q2 Financial Statement](#), pp. 23 – 24, PDF pp. 25-26. \$17,289,319.

2024: Amount Outstanding June 30, 2024, $\$17,289,319 \times (4.7\%/2) = \$17,695,618$

Roll over assumption over the life of the contracts consistent with Trans Mountain's Quantitative Financial Outlooks.

2025: $\$17,695,618 \times 1.047\% = \$18,527,312$

2026: $\$18,527,312 \times 1.047\% = \$19,398,096$

2027: Trans Mountain commences payment of interest expense beginning in September 2027 at a rate of 5% reducing TMP Finance payment of interest in kind. $\$19,398,096 \times 1.047 - (\$495.25/12) \times 4 = \$20,309,641$

2027 – 2043: TMP Finance Loan increases by 4.7% per year less \$495.25 paid by TMC as cash interest.

2044: 4 months under the same assumptions

3.4 Trans Mountain Uncommitted Revenue Forecast 2024 as Indicated by Throughput

**Table 3.4-1
Trans Mountain Throughput for Revenue Shortfall Projection 2024**

	Actual Throughput b/d	Projected b/d	Uncommitted Difference (shortfall) b/d	Revenue Shortfall 2024 \$	Capacity Projected	Capacity Actual
May	411,120	707,500	0	0	79%	79%
June	704,058	707,500	0	0	79%	79%
July	704,116	707,500	0	0	79%	79%
August	698,933	756,500	(49,000)	19,184,970	85%	79%
September	673,656	756,500	(49,000)	18,566,100	85%	79%
October	739,346	756,500	(17,154)	6,716,306	85%	83%
November	740,000 e	756,500	(16,500) e	6,251,850	85%	83% ^e
December	740,000 e	756,500	(16,500) e	6,460,245	85%	83% ^e
Total				\$57,179,471		

e = estimated

Difference (shortfall) is uncommitted 49,000 b/d forecast unless throughput exceeds 707,500 b/d because committed is 707,500 and tolls must be paid whether barrels are shipped or not. If throughput exceeds 707,500 b/d shortfall is calculated as throughput minus 707,500.

Actual Throughput to October from IR No.6 Response provided by way of email to Intervenors.

November and December assumed at the same level as October. There is evidence that these figures may be slightly optimistic given tanker activity. According to Port Metro Vancouver October and November saw 22 tankers while there were 20 in December¹⁶⁹ suggesting that the estimate for December's revenue shortfall in Table 3.4-1 could be conservative.

Projected barrels per day from Trans Mountain IR No. 4.1-2 and [Table 2.14.1](#), p. 22, PDF p. 23, relied on to generate Quantitative Financial Outlook 4.1b.1.

No revenue sharing at 85% throughput and therefore revenue shortfall is to Trans Mountain's account.

Average Uncommitted Toll \$12.63 from 4.1.b.1.

Shortfall calculated as barrels shortfall x average uncommitted toll x #days in the month.

It is understood that uncommitted throughput could have occurred because committed shippers did not ship according to their capacity, and Trans Mountain sold uncommitted space even though the total throughput is less than projected.

It would be helpful for Trans Mountain to provide an update to its Quantitative Forecast Outlook to include actual figures for 2024 since this projection is based on throughput data that does not distinguish between committed and uncommitted volumes. As stated in this report, it is unclear why Trans Mountain did not update its revenue projection for 2024 when it adjusted its expense figures in response to TWN No. 2.1.

¹⁶⁹ Source: Email correspondence with Port Metro Vancouver dated January 21, 2025.

3.5 Arithmetic Average, Geometric Average, and IRR

Table 3.5-1

Table 1: Internal Rate of Return vs. Geometric Mean Comparison

Year	Investment (Avg.)	Depreciation	Return \$	Return on and of Capital	Return %
0	\$100,000			-\$100,000	
1	\$97,500	\$5,000	\$4,000	\$9,000	4.10%
2	\$92,500	\$5,000	\$4,000	\$9,000	4.32%
3	\$87,500	\$5,000	\$5,000	\$10,000	5.71%
4	\$82,500	\$5,000	\$5,000	\$10,000	6.06%
5	\$77,500	\$5,000	\$5,000	\$10,000	6.45%
6	\$72,500	\$5,000	\$5,000	\$10,000	6.90%
7	\$67,500	\$5,000	\$5,000	\$10,000	7.41%
8	\$62,500	\$5,000	\$5,000	\$10,000	8.00%
9	\$57,500	\$5,000	\$5,000	\$10,000	8.70%
10	\$52,500	\$5,000	\$5,000	\$10,000	9.52%
11	\$47,500	\$5,000	\$6,000	\$11,000	12.63%
12	\$42,500	\$5,000	\$6,000	\$11,000	14.12%
13	\$37,500	\$5,000	\$6,000	\$11,000	16.00%
14	\$32,500	\$5,000	\$6,000	\$11,000	18.46%
15	\$27,500	\$5,000	\$6,000	\$11,000	21.82%
16	\$22,500	\$5,000	\$6,000	\$11,000	26.67%
17	\$17,500	\$5,000	\$6,000	\$11,000	34.29%
18	\$12,500	\$5,000	\$6,000	\$11,000	48.00%
19	\$7,500	\$5,000	\$7,000	\$12,000	93.33%
20	\$2,500	\$5,000	\$7,000	\$12,000	280.00%
				Geometric Average	24.19%
				IRR	7.99%

Arithmetic Average 31.63%

Source: Trans Mountain Pipeline ULC, Reply Evidence of John J. Reed, January 31, 2013, [A3F1C6](#), p. 9, PDF p. 11.

Arithmetic average calculated by adding return percentages which sum to 632.49% and dividing by 20 = 31.63%

3.6 Capital Cost Coverage from First Full Year of Revenue

Table 3.6-1

Capital Cost Coverage

Capital Cost \$ millions	Base Fixed Toll \$	Weighted Average \$	First Full Year Revenue \$ millions	Percentage
5,370	4.33	3.73	963	17.9
7,418	5.76	4.96	1,281	17.3
34,485	11.46	9.88	2,551	7.4
34,485	24.71	21.30	5,501	16

Base Fixed Toll is 16% greater than Weighted Average.

Weighted Average x 707,500 committed barrels per day x 365 days = First Full Year Revenue.

First Full Year Revenue/Capital Cost = Percentage Coverage.

3.7 Cost of Service

1. Calculation of \$2.4 billion Revenue Shortfall from Tolling Methodology as compared to Cost-of-Service for first 20 months of operation

Revenue from Tolling Methodology and Revenue Requirement under Cost-of-Service provided by Trans Mountain in TWN Motion Update Attachment 2.3(t), [A9F3D8](#), PDF p.3, CER 4.1 b.3 TWN Motion Update

All figures in \$millions.

Revenue guaranteed by the Tolling Methodology through committed fixed tolls

Line 13: 2024 \$1,707

Line 13: 2025 \$2,588

Total Revenue Generation first 20 months $\$1,707 + \$2,588 = \$4,295$

Power and Other Variable Costs

Line 127: 2024 \$89

Line 127: 2025 \$153

Total Revenue Generation from variable toll first 20 months $\$89 + \$153 = \$242$.

Total Revenue Generated by Tolling Methodology committed fixed and variable tolls:

$\$4,295 + \$242 = \underline{\underline{\$4,537}}$

Revenue Requirement under Cost-of-Service

2024 $\$2,745 + \17 Province of BC = \$2,762 million

2025 $\$4,192 + \25 Province of BC = \$4,217 million

Total Revenue Required first 20 months = **\$6,979**

Shortfall first 20 months of operation: $\$6,979 - \$4,537 = \$2,442$ million or **\$2.4 billion**.

Notes:

Trans Mountain's figures for CER 4.1 b.3 TWN Motion Update (no uncommitted capacity utilization) are relied on since they have a higher likelihood of reflecting Trans Mountain's revenue stream than the Base Case CER 4.1b.1 TWN Motion Update given the experience of uncommitted capacity utilization during the first 8 months of operation. Further, Cost-of-Service is a methodology that guarantees revenue to cover costs which are allocated through tolls and is more appropriately compared to the Tolling Methodology's guaranteed revenue.

It is recognized that the variable toll under the Tolling Methodology would generate revenue to cover 'Power and other costs' if committed shippers use their committed capacity. An estimate for the total 'Power and other costs' in 2024 and 2025 has been included in Trans Mountain's Cost-of-Service table so it is assumed that this represents the revenue that Trans Mountain would receive through the variable toll under the Tolling Methodology. This revenue is not guaranteed, but likely.

Trans Mountain does not appear to have included the cost of the contractual payment to the Province of BC in its Cost-of-Service calculation. Assuming it would be a valid cost under a Cost-of-Service methodology a total amount of \$42 million over the first 20 months of operation has been added to the Revenue Requirement.

In calculating the return on capital for debt at a ratio of 55% on rate base, Trans Mountain applied its cost of debt. It is unclear why Trans Mountain did not use the ITS return on debt. Trans Mountain's figure has been relied on for this analysis.

2. Annual average toll rate shortfall of \$5.66 per barrel

Over 610 days at 707,500 b/d revenue shortfall of \$2,442 million results in an average toll rate shortfall of \$5.66 per barrel. $(\$2,442,000,000/707,500)/610 = \5.6583 or \$5.66 rounded.

Note:

Average toll rate and Indicative Toll are not directly comparable. The Indicative Toll represents the Burnaby delivery for light oil under a 15-year contract and a commitment for 75,000 barrels a day or fewer.

3. Cost-of-Service tolls would be significantly higher than the tolls determined by the Tolling Methodology

In 2012 Cost-of-Service tolls were lower than the Tolling Methodology by \$1.11 per barrel for the Indicative Edmonton to Burnaby delivery of light oil (Table 3.7-1 $\$4.74 - \$3.63 = \$1.11$).

In 2024, Cost-of-Service tolls would be \$3.96 per barrel higher than the Indicative Fixed and Variable Toll determined by the Tolling Methodology if variable costs estimated in the Application are relied on. $\$16.00 - \$12.04 = \$3.96$ with \$12.04 calculated using the Base Fixed Toll of \$11.46 provided in CER IR No.5, and the Variable Toll of \$0.58 from the Application [A8Q6A3](#), p.3, PDF p.4. $\$11.46 + 0.58 = \12.04 .

In 2024, Cost-of-Service tolls would be \$4.03 per barrel higher than the Indicative Fixed and Variable Toll determined by the Tolling Methodology ($\$16.00 - \$11.97 = \$4.03$) if the variable costs provided in Supp. Attachment 2.3t Power and Other Variable Costs were relied upon to estimate the per barrel variable cost, and \$4.16 per barrel higher in 2025 ($\$16.40 - \$12.24 = \$4.16$) than the Indicative Fixed and Variable tolls determined by the Tolling Methodology.

Table 3.7-1 below, provides the per barrel costs under Cost-of-Service and the Tolling Methodology estimated using the variable costs in Supp. Attachment 2.3t whereas the figures in the Report adopt the more conservative estimate for variable costs from the Application.

Table 3.7-1**Per Barrel Cost Under Cost of Service and Tolling Methodology
2012, 2024 and 2025**

Cost of Service 2012	Fixed and Variable Indicative Toll 2012	Cost of Service 2024	Fixed and Variable Indicative Toll 2024	Cost of Service 2025	Fixed and Variable Indicative Toll 2025
\$3.63	\$4.74	\$16.00	\$11.97	\$16.40	\$12.24

Sources:

2012 Cost-of-Service and Indicative Toll Appendix 1 to CAPP 1.3, [A3E7F5](#).

2024 Cost-of-Service Edmonton to Burnaby from Supp. Attachment TWN 2.3t, Line 150, PDF p.3, [A9F3D8](#).

2024 Indicative Toll Fixed \$11.46 CER IR No. 5.1c (c2) [A9D9W1](#), and variable \$0.51 calculated based on Supp. Attachment 2.3t Power and Other Variable Costs as detailed below. Note: TWN 2.3t Tolling Methodology Revenue is based on a capital cost of \$34.2 billion, not the revised figure of \$34.5 billion. The Indicative Toll above is based on the current capital cost of \$34.5 billion.

2025 Indicative Toll Fixed based on 2024 Indicative Toll increased by 2.5% for 8 months and variable \$0.59 calculated below.

Variable Toll 2024: 707,500 b/d for 245 days allocated over the variable costs from line 127 TWN 2.3t. of \$89 million.

$\$89,000,000 / 707,500 / 245 = \0.51345 or 51 cents a barrel. Fixed Toll $\$11.46 + \$0.51 = \$11.97$

Variable Toll 2025: 707,500 for 365 days allocated over the variable costs from line 127 TWN

2.3t of \$153 million. $153,000,000 / 365 / 707,500 = \0.59248 or 59 cents. Fixed Indicative Toll

$\$11.46$ for 4 months $\$11.46 \times 4 = \45.84 . $\$11.46$ increased by 2.5% for 8 months $(\$11.46 \times$

$1.025) \times 8 = \$93.97$. $(\$45.84 + \$93.97) / 12 = \$11.65$. Annualized indicative toll of $\$11.65 + \0.59

$= \$12.24$.