

**BEFORE THE
ALBERTA UTILITIES COMMISSION**

**REPORT BY
TOM CHAPMAN**

**FOR
FORTISALBERTA, INC.**

Type 1 Capital Tracker Application

Proceeding ID No. 29513

Appendix F: Brattle Report

October 23, 2024



TABLE OF CONTENTS

I.	Introduction	1
II.	Customer Growth Driven by the Alberta Economy	3
III.	Electricity Sector Cost Changes	18
IV.	Most Appropriate Forecasts to Determine Future Trends	23

1 **I. INTRODUCTION**

2 **Q1. Please state your name and business address.**

3 A1. My name is Tom Chapman, and I am a Principal at The Brattle Group (“Brattle”), whose
4 business address is 40 King Street West, Suite 3301, Toronto, Ontario, M5H 3Y2.

5 **Q2. What is your report’s focus?**

6 A2. Brattle has been engaged by FortisAlberta Inc. (“FortisAlberta”) to provide a comparative
7 analysis of the Alberta economy. In this report, I review both historical and forecasted
8 economic and demographic indicators for two distinct periods: i) 2018 – 2022 (“First
9 Period”) and ii) 2023 – 2028 (“Second Period”). The review comprises both quantitative
10 and qualitative analyses of key economic variables, population, and industry trends that are
11 impacting the growth of Alberta’s electricity customers, as well as how electricity sector
12 costs are changing relative to consumer prices more broadly. This report also provides an
13 opinion on the most appropriate assumptions for both customer growth and electricity
14 system costs for the Second Period.

15 **Q3. What is your professional background?**

16 A3. I am a senior member of Brattle’s Electricity Practice and I lead electricity work at Brattle’s
17 Canadian office in Toronto. As an energy economist, I have led projects across different
18 practice areas and across different Canadian provinces, including economic, benefit-cost,
19 benchmarking analysis, and rate and pricing analyses. I have also worked in the Canadian
20 electricity industry for Ontario’s Independent Electricity System Operator and with the

1 Ontario Ministry of Energy, where, amongst other responsibilities, I was responsible for
2 overseeing annual and quarterly financial reviews of Ontario Power Generation and Hydro
3 One, two Crown Corporations.

4 I have been a lead witness and provided testimony and expert reports to Canadian
5 regulators and policymakers on matters concerning electricity costs, regulatory charges,
6 and energy policy. My testimony and expert reports have been presented before state
7 regulatory commissions, the Ontario Energy Board, and legislative committees.

8 I hold an M.Sc. in Business Economics and a B.Sc. (Hons) in Economics, both from the
9 University of Wales, Swansea (U.K.). I have completed executive programs at IVEY
10 Business School and Queens Smith School of Business. I have also taught postgraduate
11 courses on Electricity Markets at Toronto Metropolitan University. My curriculum vitae is
12 provided in Appendix F-1.

13 **Q4. Are you aware of your duty as an independent expert witness under the requirements**
14 **of AUC's Rule 001: *Rules of Practice*?**

15 A4. Yes. I acknowledge that as an independent expert witness, I have a duty to provide opinion
16 evidence to the Alberta Utilities Commission ("AUC" or the "Commission") that is fair,
17 objective, and non-partisan.

18 My colleagues at Brattle assisted me in conducting this study. While I benefited from the
19 assistance and reviews provided by my colleagues, I alone am responsible for the contents
20 and conclusions in this expert report.

1 **Q5. How is your report structured?**

2 A5. Section II of my report discusses the means by which customer growth in the electricity
3 distribution service is being driven by the outlook of the Alberta economy. Section III
4 explains recent developments in the electricity sector both from a policy and supply chain
5 perspective and their impact on electricity system input costs. Finally, Section IV discusses
6 what forecasts and assumptions are most appropriate to be used when reviewing
7 FortisAlberta's future customer growth.

8 **II. CUSTOMER GROWTH DRIVEN BY THE ALBERTA ECONOMY**

9 **Q6. What key economic indicators did you review to determine the impact of the Alberta
10 economy on customer growth?**

11 A6. This section will review the following key economic and demographic indicators for
12 Alberta over the two time periods:

- 13 • Energy Prices
- 14 • Economic Growth
- 15 • Interest Rates
- 16 • Labour Market Conditions
- 17 • Population Growth
- 18 • Housing

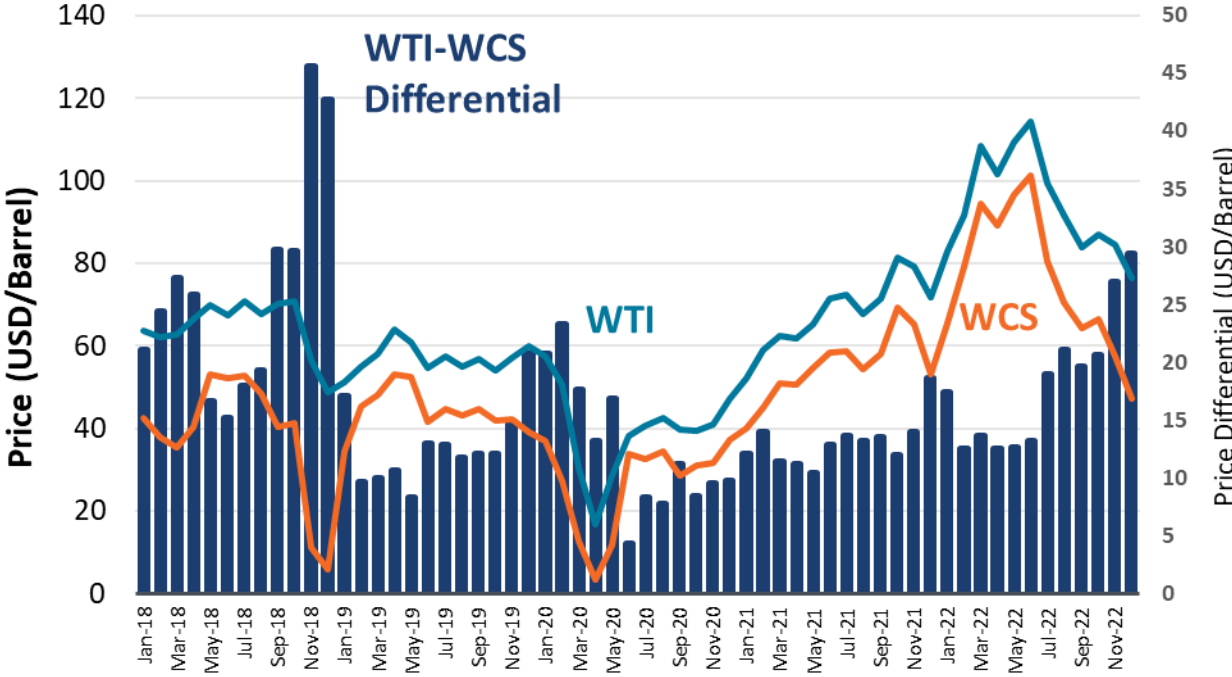
19 Where applicable, both historical and forecast data are presented for the above indicators.

20 **Q7. What has been the trend in oil prices during the First Period?**

21 A7. I start my assessment with a review of energy prices, which are particularly important to
22 the Albertan economy, given its high share of overall economic activity. During the early

1 portions of the First Period, oil prices were relatively depressed compared to historical
 2 trends for both the West Texas Intermediate (“WTI”) prices as well as the Western
 3 Canadian Select (“WCS”) prices. As can be seen in Figure 1, oil prices started to rise in
 4 late 2021 and early 2022 before settling at an average price of USD\$77.6/barrel and
 5 USD\$58.9/barrel in 2023 for WTI and WCS, respectively. The average annual WTI price
 6 over the First Period was USD\$64.7/barrel.

7 **Figure 1: WCS Price Differential First Period**



8
 9 Sources and Notes:
 10 1. The Alberta Energy Regulator, Government of Alberta, and the U.S. Energy Information Administration

1 **Q8. What have oil prices been most recently, and where are they forecasted to be in the**
2 **Second Period?**

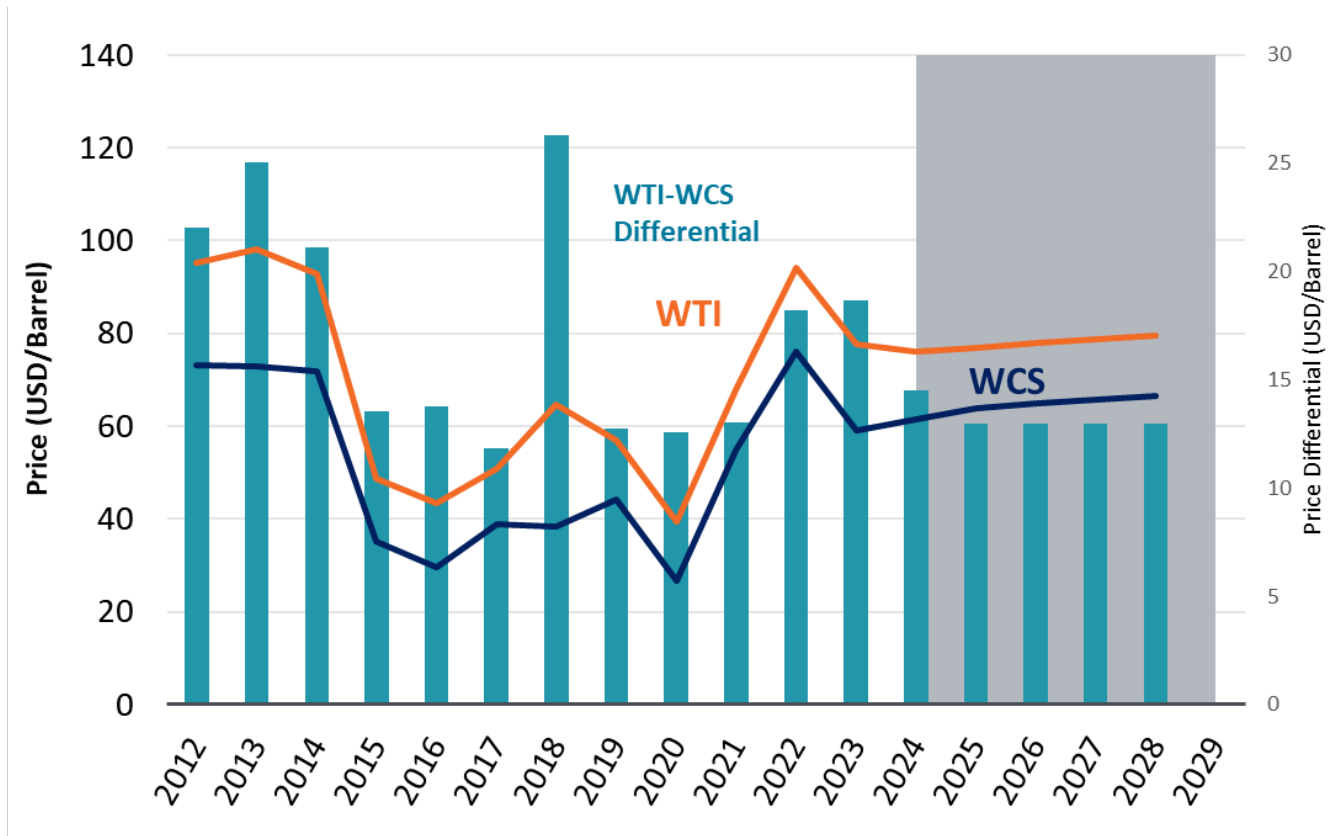
3 A8. The Alberta Energy Regulator's ("AER") most recent forecast, shown in Figure 2, predicts
4 the base-price case for WTI to strengthen to USD\$77.0/barrel in 2025 with a steady
5 increase to USD\$83.6/barrel in 2033.¹ Over the same period, the AER's base-price case
6 forecast for WCS is USD\$64.0/barrel and USD\$70.6/barrel by 2025 and 2033,
7 respectively.² The relative strength of the WCS to WTI is also influenced by the completion
8 of the Trans Mountain Pipeline Expansion ("TMX"), which provides Alberta oil with
9 additional egress to global markets, particularly in Asia. The average annual WTI price
10 over the Second Period is forecast to be USD\$77.8/barrel. I would note that although the
11 consensus forecast is for higher oil prices in the Second Period, a significant slowdown in
12 global economic activity would likely result in lower oil prices.

¹ Alberta Energy Regulator, Alberta Energy Outlook (ST98), Crude Oil Prices, updated June 2024.

² *Ibid.*

1

Figure 2: WCS Price Differential Historical and Forecast



2

3 Sources and Notes:

4 1. The Alberta Energy Regulator, Government of Alberta, and the U.S. Energy Information Administration

5

6 **Q9. What are the contributions of the energy sector to Alberta’s economic growth?**

7 A9. The energy sector is a significant portion of the overall Alberta economy, with over 21%
8 of Alberta’s annual gross domestic product (“GDP”) coming from the oil and gas
9 subsector, along with 6% of provincial employment.³ In 2022, upstream energy investment
10 was estimated to be \$24.6 billion, and in fiscal year 2022/23, the oil sands alone accounted
11 for \$16.9 billion in royalty revenues to the Province.

³ Source: <https://www.jobbank.gc.ca/trend-analysis/job-market-reports/alberta/sectoral-profile-mining-oil-gas>

1 **Q10. How will changes in energy prices impact broader economic activity, including**
2 **customer growth for electricity utilities?**

3 A10. The increase in average annual WTI oil prices from USD\$66.7/barrel in the First Period to
4 the forecasted USD\$77.8/barrel in the Second Period can be expected to drive robust
5 economic growth in the Albertan economy for the foreseeable future. Strong oil and gas
6 revenues will sustain employment in the sector and spur continued growth in the private
7 and public service sectors. Healthy economic conditions will attract immigration and
8 migration from other Canadian provinces and result in a growing population, high levels
9 of housing starts, and utility connections. I provide a more thorough assessment of the
10 impact of these economic metrics later in this report.

11 **Q11. Are there other areas of economic growth that Alberta is expecting in the Second**
12 **Period?**

13 A11. In addition to the growth in the Alberta oil and gas sector, the Province is expected to
14 increase investment to an average of \$5.2 billion per year in a variety of sectors from 2025-
15 2027.⁴ These sectors include investments in large-scale emissions reduction projects,
16 including the power generation, manufacturing and transportation, and warehousing and
17 storage industries.⁵ The Government of Alberta is also forecasting the most significant
18 investment and growth in the utilities, manufacturing, and services sectors.⁶

⁴ Government of Alberta Fiscal Plan 2024 – 27, Economic Outlook.

⁵ *Ibid.*

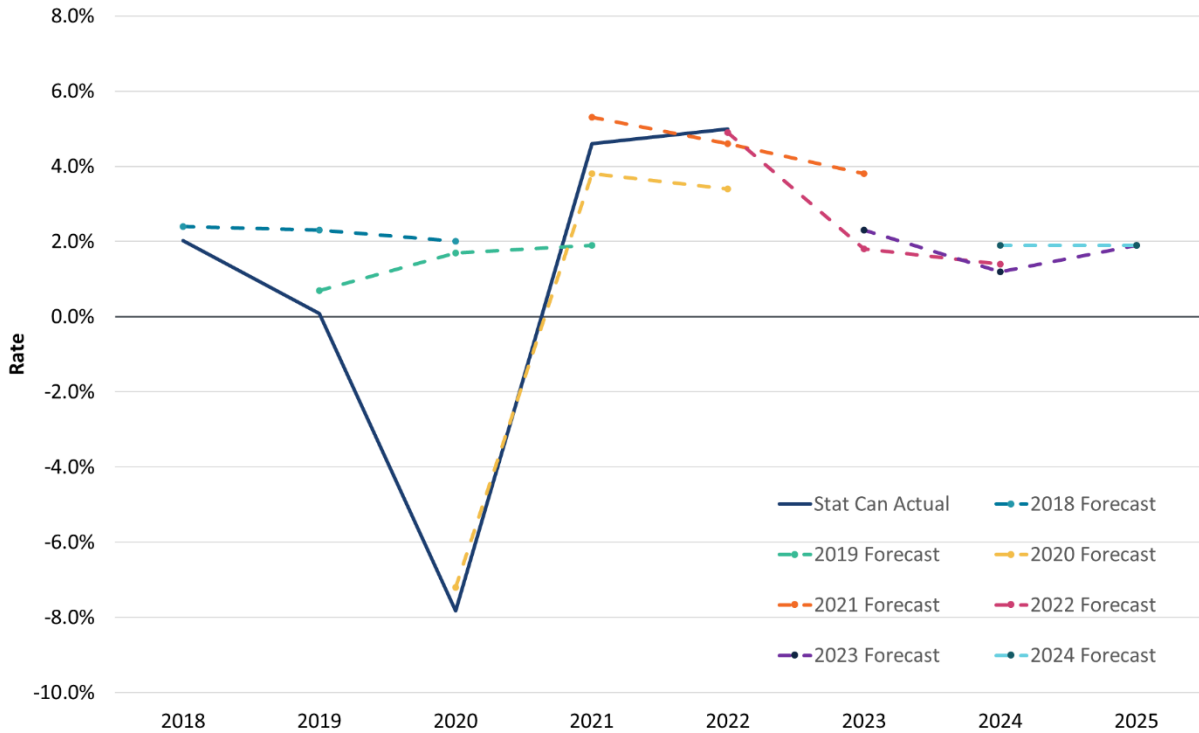
⁶ *Ibid.*

1 **Q12. What is the comparison of Alberta’s economic growth and forecasted growth between**
2 **the two periods?**

3 A12. As shown in Figure 3, the First Period saw extreme volatility in the actual real GDP growth
4 rate due to the decrease in productivity as a result of the COVID-19 pandemic, followed
5 by a swift rebound in growth once the impacts of the pandemic had lessened. Forecasts
6 during such a period were understandably unable to predict the pandemic and subsequent
7 impacts on economic growth. However, current forecasts show that Alberta’s GDP is
8 projected to return to levels similar to those before the pandemic.

1

Figure 3: Alberta Real GDP Growth and Forecasts



2

3 Sources and Notes:

- 4 1. TD Economics, Canadian Economic Outlook, Real GDP, <https://economics.td.com/Canada>
- 5 2. Government of Alberta, Real Gross Domestic Product at Market Prices, Annual Percent Change, Canada and
- 6 Alberta, [https://open.alberta.ca/dataset/real-gross-domestic-product-at-market-prices-annual-percent-change-](https://open.alberta.ca/dataset/real-gross-domestic-product-at-market-prices-annual-percent-change-canada-and-alberta)
- 7 [canada-and-alberta](https://open.alberta.ca/dataset/real-gross-domestic-product-at-market-prices-annual-percent-change-canada-and-alberta)

8

9 **Q13. How do changes in interest rates during the two periods impact Alberta's economic**

10 **outlook during the Second Period?**

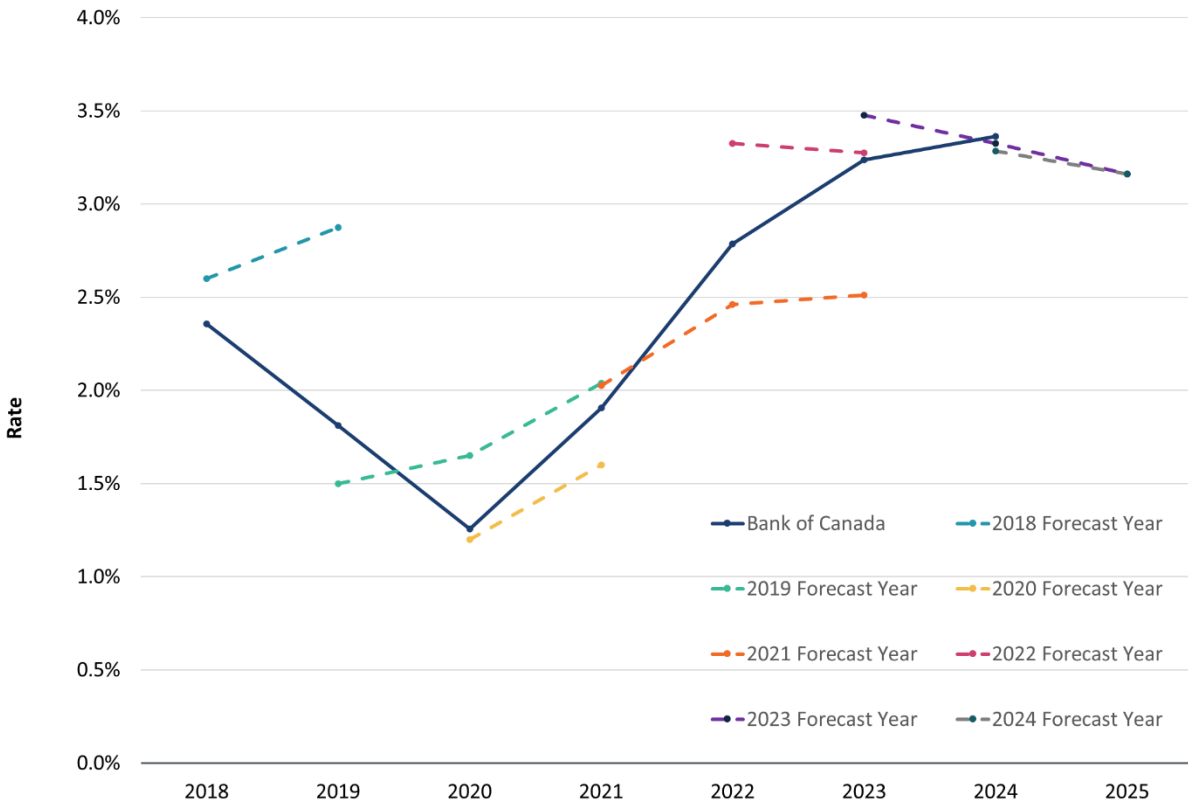
11 A13. As a direct result of inflationary pressure in 2021, the Bank of Canada sought to control

12 inflation through a series of interest rate increases, as shown in Figure 4. While interest

13 rates remain at elevated levels compared to those seen in the First Period, the Bank of

1 Canada has started to lower benchmark rates with three consecutive cuts of 25 basis points
 2 on June 5, 2024, July 24, 2024, and September 4, 2024, with a subsequent 50 basis point
 3 reduction on October 23, 2024.⁷ It has indicated that further rate cuts are likely, assuming
 4 inflation continues to trend down. This policy will likely bolster economic activity within
 5 Alberta, which is already growing strongly in a high-interest rate environment.

6 **Figure 4: Canadian Interest Rate and Forecasts**



7
 8 Sources and Notes:
 9 1. TD Economics, Interest Rate Outlook, 30-Yr Govt. Bond Yield, Canada, <https://economics.td.com/Canada>

⁷ Sources: <https://www.bankofcanada.ca/2024/06/fad-press-release-2024-06-05/>,
<https://www.bankofcanada.ca/2024/07/fad-press-release-2024-07-24/>,
<https://www.bankofcanada.ca/2024/09/fad-press-release-2024-09-04/>, and
<https://www.bankofcanada.ca/2024/10/fad-press-release-2024-10-23/>.

1 2. Bank of Canada 30-Year Zero Coupon Bond Yield (ZC3000YR), [https://www.bankofcanada.ca/rates/interest-](https://www.bankofcanada.ca/rates/interest-rates/bond-yield-curves/)
2 [rates/bond-yield-curves/](https://www.bankofcanada.ca/rates/interest-rates/bond-yield-curves/)
3

4 **Q14. How is economic growth impacting the labour market in Alberta?**

5 A14. From 2023 to 2028, Alberta is expected to see an average of 144,000 new job openings
6 each year over the ten years, and an average of 146,000 workers are expected to join the
7 labour force as new migrants, re-entrants, or changes in occupations.⁸ Of these new jobs,
8 approximately 46% will be created from an expansion of demand due to economic growth,
9 and 54% will be created from replacement demand.⁹ Mining and oil and gas extraction will
10 be the most significant and highest-contributing industry to these new jobs, followed by
11 finance, insurance and real estate, manufacturing, and construction.¹⁰ Furthermore, the
12 working-age population (15 to 64 years) is expected to increase from 3.0 million in 2022
13 to over 4.5 million by 2050.¹¹ Table 1 outlines the long-term Alberta occupational forecast,
14 indicating that for a number of years within the Second Period, Alberta will have a shortage
15 of workers compared to the number of new job openings, which is indicative of a strong
16 economy.

⁸ Alberta's Occupational Outlook Highlights

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ Population Projections Alberta and Census Division, 2023 – 2051, <https://www.alberta.ca/current-provincial-population-projections>

Table 1: Alberta’s Forecasted Occupational Outlook

	2023	2024	2025	2026	2027	2028
Net Change, Job Openings	166,988	157,255	151,253	136,235	126,385	128,622
Net Change, Job Seekers	169,858	146,015	142,870	138,710	139,481	139,499
Annual Imbalance	2,870	-11,240	-8,383	2,475	13,096	10,876
Cumulative Imbalance	2,870	-8,370	-16,753	-14,278	-1,182	9,694

Sources and Notes:

1. Alberta’s Occupational Outlook Highlights, 2023-2033, <https://open.alberta.ca/publications/albertas-occupational-outlook>

Q15. Is the economic growth and labour market having an impact on population growth within Alberta?

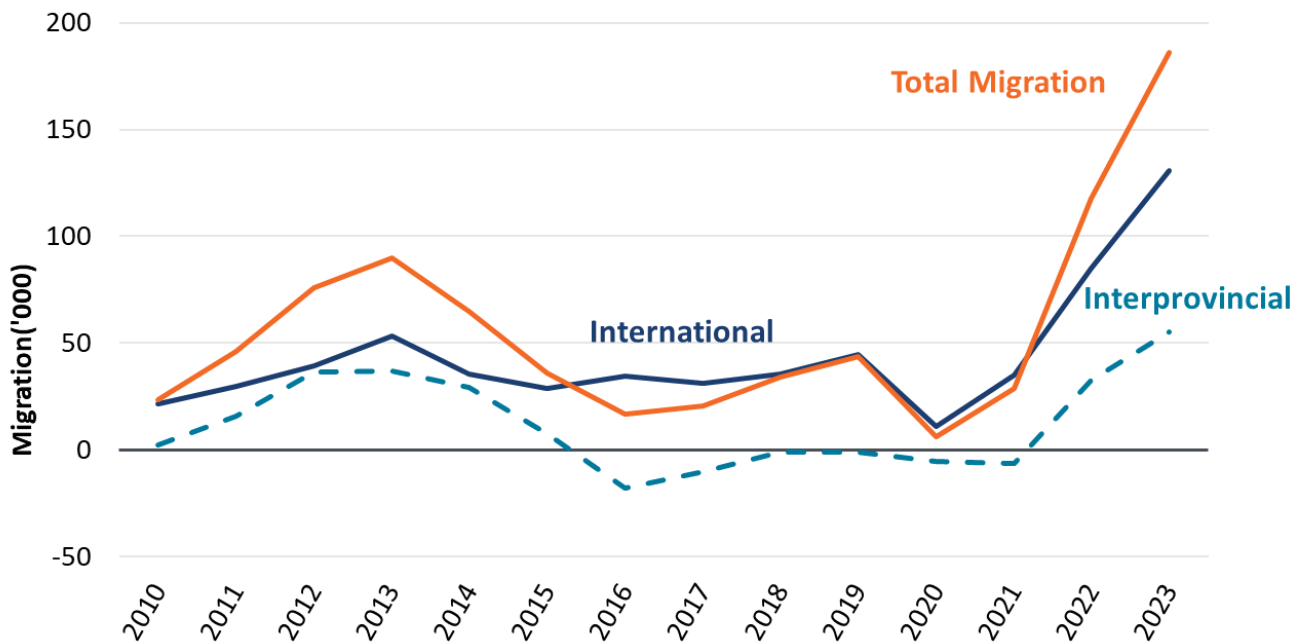
A15. Yes. In conjunction with the positive outlook for the Alberta economy and the growth in the labour market, the Government of Alberta has developed policies to increase skilled labour within the Province, spearheaded by the “Alberta is Calling” campaign.¹² The campaign began in 2022 with a series of advertisements aimed at promoting the affordability and lifestyle benefits of living within Alberta. Phase 1 of the advertisements targeted residents of the cities of Toronto and Vancouver and aimed to attract workers from the health, trades, and technology sectors to move to Alberta. Phase 2 of the campaign had a budget of \$4.95 million and expanded advertisements to various regions within Ontario and Atlantic Canada. Phase 3 provides a moving bonus of a \$5,000 tax credit for skilled trades workers who migrate to the Province between May 1, 2024, and December 31, 2024.¹³

¹² Source: <https://www.albertaiscalling.ca/>

¹³ Source: <https://www.alberta.ca/alberta-is-calling-moving-bonus>

1 As shown in Figure 5, migration into Alberta from both international and interprovincial
 2 sources increased dramatically starting in 2022, resulting in a significant increase in the
 3 population growth rate of the Province as well as the total population, as shown in Figure
 4 6 and Figure 7, respectively. Alberta’s population growth rate was below 0.5% in the First
 5 Period until Q3 2022, when the quarterly population growth increased and remained above
 6 0.8% to as high as 1.3%. In population terms, during the First Period from Q1 2018 to Q4
 7 2019, the eight quarters preceding COVID, the total population of Alberta increased by
 8 approximately 115,000. In contrast, in the most recent eight quarters, Q3 2022 to Q2 2024,
 9 the Province’s population increased by approximately 340,000 residents.

10 **Figure 5: Alberta Migration by Source**

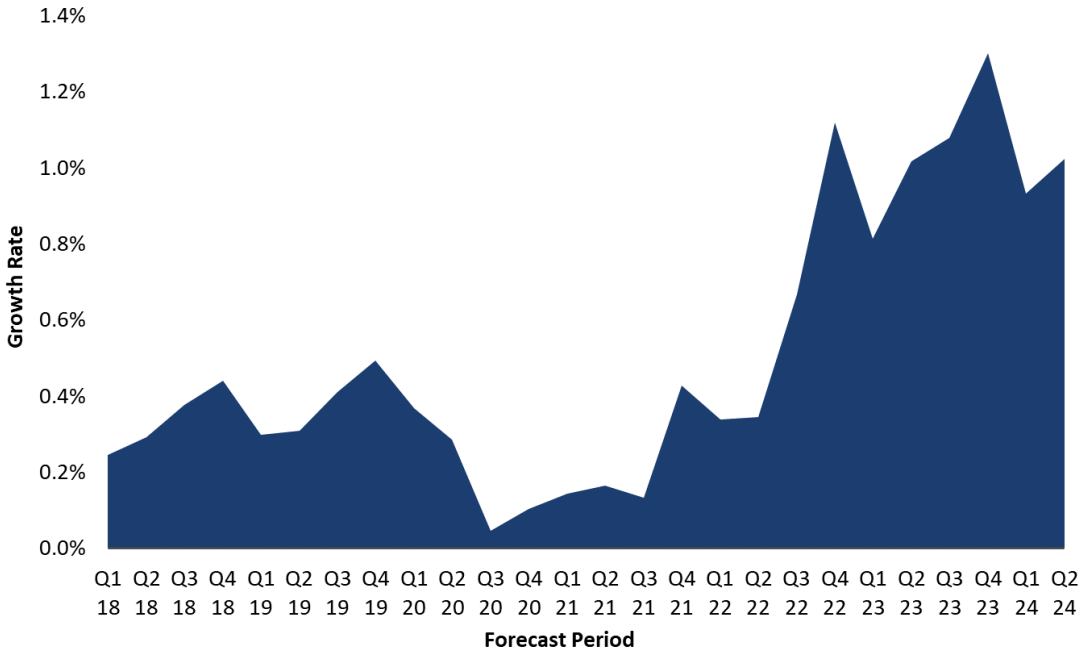


11
 12 Sources and Notes:

- 13 1. Statistics Canada, Estimates of the Components of Interprovincial Migration, Quarterly,
 14 <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710002001>

1 2. Statistics Canada, Estimates of the Components of International Migration, Quarterly,
2 <https://www150.statcan.gc.ca/t1/tb1/en/tv.action?pid=1710002001>

3 **Figure 6: Alberta Provincial Population Growth Rate**



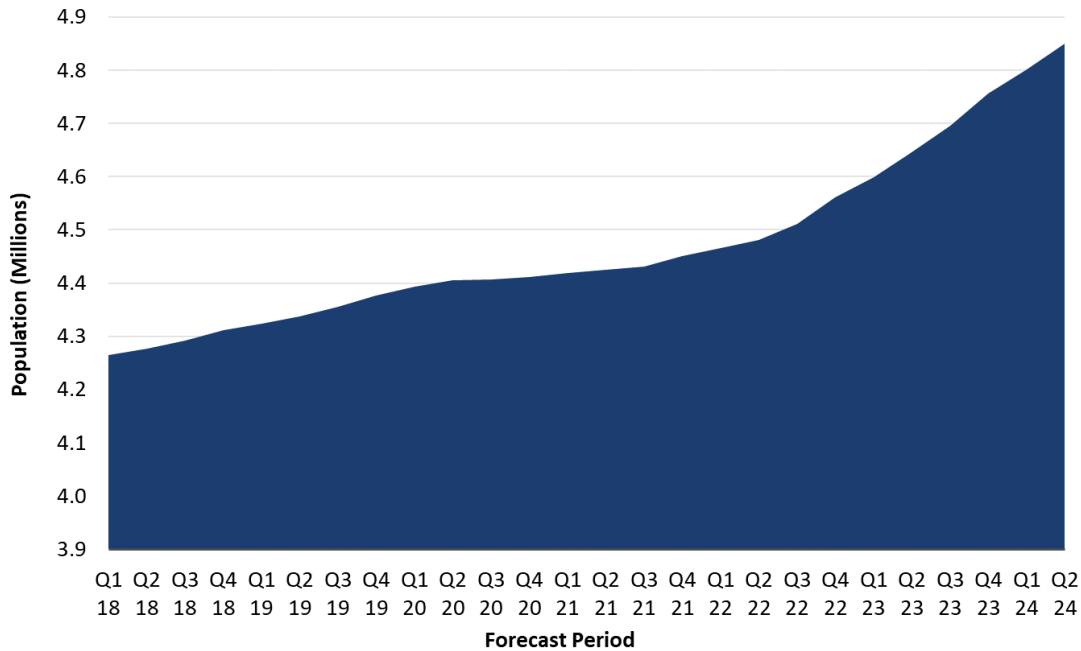
4
5 Sources and Notes:

6 1. Statistics Canada, Canada Population Estimates, Quarterly,
7 <https://www150.statcan.gc.ca/t1/tb1/en/tv.action?pid=1710000901>

8

1

Figure 7: Alberta Provincial Population



2

Sources and Notes:

3

1. Statistics Canada, Canada Population Estimates, Quarterly, <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000901>

4

5

6

Q16. What are the current forecasts for population growth within Alberta?

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A16. As previously mentioned, the “Alberta is Calling” campaign remains active. In its latest projections, the Government of Alberta is expecting an average annual population growth rate from 2022 to 2025 of 2.5%.¹⁴ By 2051, the Province is expected to reach a population of nearly 7.1 million, which is a 2.6 million increase in residents from current levels. Population growth is expected to be concentrated in and around the regions with the largest

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¹⁴ Population Projections Alberta and Census Division, 2023 – 2051, <https://www.alberta.ca/current-provincial-population-projections>

1 urban centres, particularly the Edmonton-Calgary Corridor, whereby in 2051, 81% of
2 Albertans are projected to reside.¹⁵

3 **Q17. Has this increase and expected continuation of population growth within Alberta**
4 **resulted in increased housing needs within the Province?**

5 A17. Yes. As shown in Table 2, total actual housing unit starts have substantially increased in
6 Alberta since 2021, coincident with the increase in population during the same period. In
7 fact, in the first six months of 2024, Alberta’s housing starts have increased by 54%
8 compared to 2023, with more than 21,500 new homes being constructed and the most
9 housing starts in any January-June period on record.¹⁶ Furthermore, Table 3 shows that
10 forecasts for housing starts have increased by 40% to well above pre-COVID levels.

11 **Table 2: Actual Housing Starts in Alberta**

	2018	2019	2020	2021	2022	2023
Single-detached units	10,682	9,450	8,975	13,322	13,863	12,339
Multiples	14,073	16,510	14,067	17,290	21,580	22,886
Semi-detached units	3,054	2,680	2,480	2,915	2,745	2,838
Row units	3,567	3,598	2,884	3,833	4,524	5,532
Apartment and other unit types	7,452	10,232	8,703	10,542	14,311	14,516
Total units	24,755	25,960	23,042	30,612	35,443	35,225

12 Sources and Notes:

13 1. Statistics Canada, Canada Mortgage and Housing Corporation, Canada, Provinces, Monthly,
14 <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3410014301>
15

15 *Ibid.*

16 “Record starts keep Alberta’s housing boom strong”, Alberta Government News, July 18, 2024,
<https://www.alberta.ca/release.cfm?xID=90671C4CF2B2C-FF27-E53E-62FEDA0B4ADD3742>

Table 3: Forecast Housing Starts in Alberta

	2018 FY	2019 FY	2020 FY	2021 FY	2022 FY	2023 FY	2024 FY	2025 FY
2018 Forecast	29,000	30,000	31,000					
2019 Forecast		26,300	27,400	30,100				
2020 Forecast			24,200	26,100	29,900			
2021 Forecast			31,400	30,900	28,800			
2022 Forecast					38,100	35,400	29,300	
2023 Forecast						34,400	33,300	31,400
2024 Forecast							40,200	35,400

Sources and Notes:

1. TD Economics, Provincial Economic Forecast, Alberta Economic Forecasts, Housing Starts, <https://economics.td.com/ProvincialLocalAnalysis>

Q18. How has the change in economic indicators impacted the customer growth needs within Alberta between the two periods?

A18. At the end of the First Period and the start of the Second Period, a series of economic and domestic indicators diverged from historical trends, causing a step-change in the demand for customer growth of electric services within Alberta. A strong economic outlook in Alberta (bolstered by increasing oil prices and growth in a variety of sectors) has led to an increase in jobs in the Province. The Government of Alberta has successfully implemented policies to attract new workers and residents who have moved to Alberta, in part due to the lower cost of living compared to other regions within Canada. As a result, Alberta has experienced a significant increase in its population, which has led to increased demand for housing.

Based on current forecasts, I expect these economic and demographic trends to support the demand for electricity services within the Province during the Second Period.

1 III. ELECTRICITY SECTOR COST CHANGES

2 Q19. What has the general trend been from governments regarding how electricity is 3 generated and consumed?

4 A19. As a result of policy commitments and actions, utility system planners and regulators are
5 anticipating that electricity demand will rise substantially from current levels. The Canada
6 Energy Regulator (“CER”) has projected that Canadian electricity demand will double and
7 reach 1.2 terawatt hours (“TWh”) by 2050.¹⁷ The CER’s high rates of electricity demand
8 are directionally consistent with projections by the Alberta Electric System Operator,
9 whose long-term planning assessment¹⁸ is forecasting a 32% to 64% increase in capacity
10 needs and similar increases in energy demand by 2043. Other Canadian provinces and
11 advanced economies across the globe are anticipating similar growth rates, creating cost
12 and pricing pressures on industry supply chains.¹⁹ On the supply side, new sources of
13 power are being added to the grid. Increasingly, generating capacity is being added to the
14 distribution grid in the form of Distributed Energy Resources. This combination of factors
15 is creating additional demands on distribution infrastructure to facilitate two-way power
16 flows and manage increased demand-side uncertainty due to the adoption of electric
17 vehicles and the general electrification of homes and businesses. The increased demand

¹⁷ Source: <https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2023/access-and-explore-energy-future-data.html>

¹⁸ Source: <https://www.aesoengage.aeso.ca/34307/widgets/141824/documents/118661>

¹⁹ A detailed review of electricity growth and impact on industry supply chains is provided in my recent report which can be found here: <https://www.brattle.com/insights-events/publications/brattle-economists-analyze-the-impact-of-canadas-energy-transition-on-reliability-in-a-new-report-for-electricity-canada/>

1 and limited supply of electricity equipment have led to an increase in prices for this
2 infrastructure.

3 **Q20. Have these sustainability and environmental policies led governments to seek**
4 **measures to secure supply chain components for electricity infrastructure?**

5 A20. Yes. Across the globe, national policies have been developed and are in the process of
6 being implemented to facilitate large-scale investment in the electricity sector. Australia²⁰
7 and the United Kingdom²¹ have developed comprehensive, coordinated national strategies
8 that go beyond net zero and include the types of policies needed to support utilities and
9 industry on a broad-based clean energy and economy transition. The European Union is
10 putting a comprehensive policy framework in place; the Net Zero Industry Act was
11 published in 2023 as a response to the United States Inflation Reduction Act to support and
12 scale up the industrial transition to a greener economy. In the United States, the Department
13 of Energy recently launched a supply chain strategy,²² recognizing the importance of
14 securing critical electrical infrastructure to meet decades of change. Canadian provinces
15 have developed policies designed to achieve similar goals, including action plans such as
16 “Hydro-Québec’s Action Plan 2035”,²³ British Columbia’s “Powering Our Future: BC’s

²⁰ An overview of Australia’s transition plan can be found here: <https://www.energy.gov.au/government-priorities/energy-and-climate-change-ministerial-council/national-energy-transformation-partnership>

²¹ Additional information on the UKs investment goals can be found here: <https://assets.publishing.service.gov.uk/media/643583fb877741001368d815/mobilising-green-investment-2023-green-finance-strategy.pdf>

²² Source: <https://www.energy.gov/policy/securing-americas-clean-energy-supply-chain>

²³ Source: <https://www.hydroquebec.com/a/energy-transition.html>

1 Clean Energy Strategy,”²⁴ New Brunswick’s “Powering our Economy and the World with
2 Clean Energy”²⁵, amongst others.

3 **Q21. Has the demand for more electric infrastructure and tight supply chains led to an**
4 **increase in electricity input costs?**

5 A21. Yes. To understand how electricity-specific costs have changed, I analysed the Handy-
6 Whitman Index, which contains a series of public utility construction costs indexes and is
7 published semi-annually by Whitman, Requardt, and Associates for six regions within the
8 contiguous United States.²⁶ As shown in Figure 8, the Handy-Whitman Index for electricity
9 distribution system construction costs was plotted against Canadian inflation.²⁷ Since 2021,
10 those costs have substantially increased by far outpacing inflation over the same period.

²⁴ Source: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/powering-our-future#:~:text=That's%20why%20BC%20recently%20updated,2030%20for%20the%20integrated%20grid>

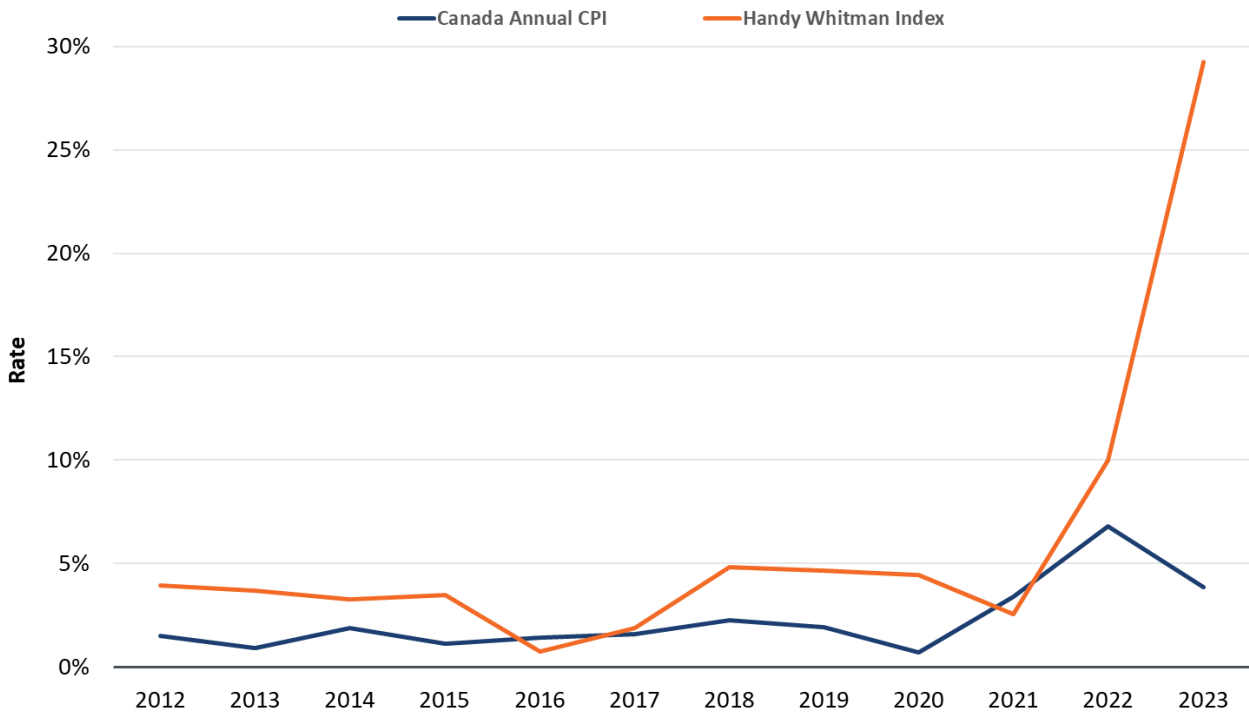
²⁵ Source: <https://www2.gnb.ca/content/dam/gnb/Corporate/Promo/energy-energie/GNB-CleanEnergy.pdf>

²⁶ The Handy-Whitman Electric Utility Construction Cost Indexes are widely used and accepted having been used in both the PJM and ISO-New England Regional Transmission Organizations (“RTO”).

²⁷ The Handy-Whitman Index is calculated for six different regions within the contiguous United States. To calculate a proxy for Alberta the three regions adjacent to Alberta the Pacific Region, Plateau Region, and North Central Region Handy-Whitman Indexes were utilized. To calculate the proxy for the Alberta electricity distribution system construction costs the Total Distribution Plant Indexes for the three regions were averaged together.

1

Figure 8: Handy-Whitman Index Compared to Canadian CPI



2

3 Sources and Notes:

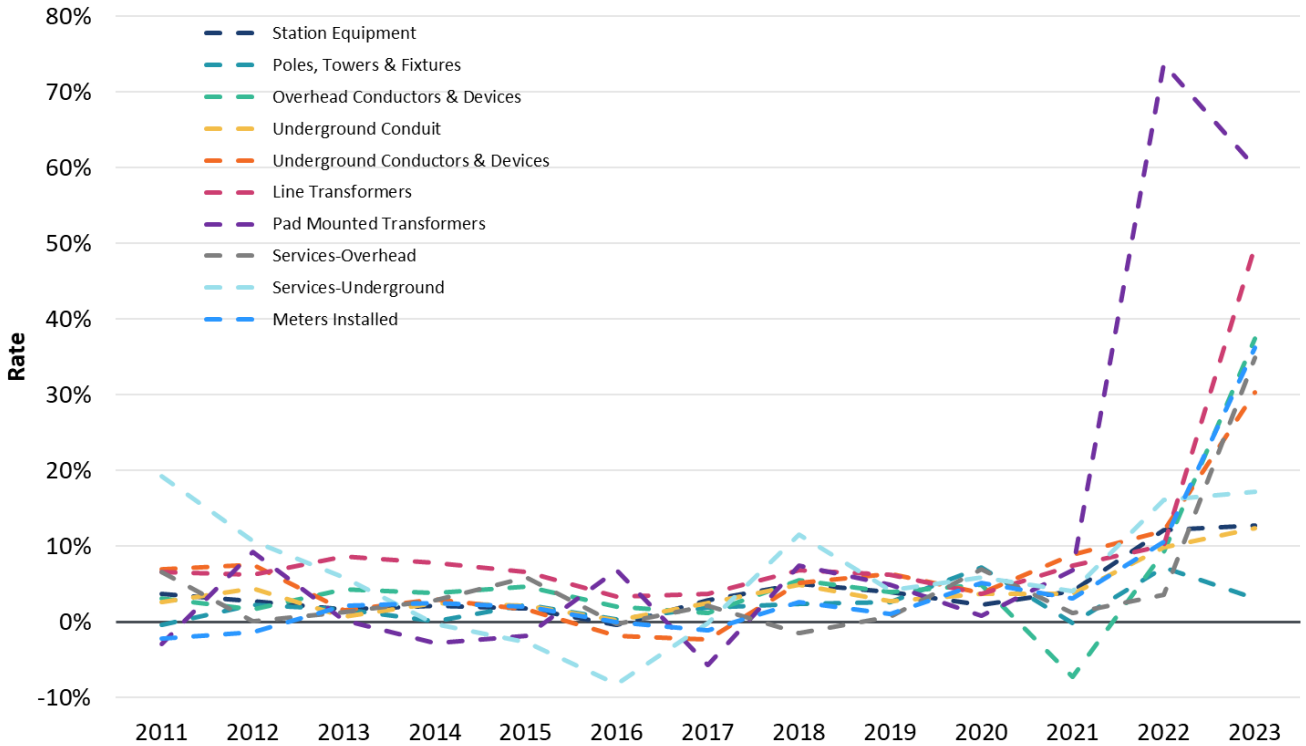
- 4 1. Handy-Whitman Index of Public Utility Construction Costs, Cost Trends of Electric Utility Construction
5 2. Statistics Canada, Consumer Price Index, monthly,
6 <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000401>

7

8 **Q22. Has the increase in prices impacted all electricity input costs in the same way?**

9 A22. No. As shown in Figure 9, costs related to transformers, overhead and underground
10 conductors, poles and towers, and both underground and overhead services have all
11 increased at a higher rate than other electricity distribution system input costs.

Figure 9: Breakdown of Handy-Whitman Electric Distribution System Construction Costs²⁸



Sources and Notes:

1. Handy-Whitman Index of Public Utility Construction Costs, Cost Trends of Electric Utility Construction

Q23. Will additional supply capabilities for electricity infrastructure be built within North America?

A23. Under business-as-usual conditions, it could be expected to see input prices moderate as additional manufacturing capacity is added to existing businesses. However, the surge in

²⁸ To calculate the breakdown of electric distribution construction costs the same three regions adjacent to Alberta (indicated in footnote 27) were utilized and averaged across the various cost items listed in Figure 9. This included the Federal Energy Regulatory Commission (“FERC”) Uniform System of Accounts: Station Equipment (362), Poles, Tower & Fixtures (364), Overhead Conductors & Devices (365), Underground Conduit (366), Underground Conductors & Devices (367), Line Transformers (368), Pad Mounted Transformers (368), Services-Overhead (369), Services-Underground (369), and Meters Installed (370).

1 demand for critical infrastructure is occurring at the same time some manufacturing is
2 being reshored away from Asian markets and back to Europe and North America where
3 input costs, and in particular labour costs, are significantly higher.²⁹ Although this trend
4 started pre-COVID, business activity has picked up substantially in the post-COVID
5 period, spurred in part by national policies and financial incentives.

6 **Q24. Will prices for electricity infrastructure during the Second Period return to those pre-**
7 **2022?**

8 A24. The net impact of a prolonged increase in demand for electricity infrastructure and an
9 expected increase in input costs means electricity sector costs during the Second Period are
10 likely to be far higher than were experienced in the First Period. Given the structural shift
11 in underlying fundamentals and the current economic outlook, barring any unforeseen and
12 unlikely circumstances, we do not expect prices to drop to historic levels.

13 **IV. MOST APPROPRIATE FORECASTS TO DETERMINE FUTURE**
14 **TRENDS**

15 **Q25. Do forecasts get more accurate over time?**

16 A25. As a matter of principle, forecasts are limited by the information available at any one point
17 in time to determine a potential forecast for any particular outcome. Given that forecasts
18 for various economic indicators in the Second Period have more data available to help
19 predict future outcomes and are closer to the future they are predicting, by that very nature,

²⁹ According to one survey, 69% of firms are reshoring manufacturing away from China to other countries including North America. Source: <https://www.forbes.com/sites/jimvinoski/2024/01/25/covid-is-fading-but-reshoring-isnt/>

1 they should be more accurate than historical forecasts of the same economic indicators.
2 That is, I expect that forecasts with more concurrent data provide a more reliable forecast
3 than the older ones and, thus, are more appropriate for the Commission's consideration.

4 In addition to assigning greater weight to forecasts with more concurrent data, a greater
5 focus should be assigned to economic fundamentals that are closely tied to utility customer
6 growth. In particular, we would recommend a greater emphasis on utility-specific cost
7 datasets than an economy-wide inflation gauge. I would stress that this is of particular
8 importance during a period when the electricity sector is undergoing significant changes,
9 not just in Alberta but across Canada and globally. Our concern is that general inflation
10 measures will materially underestimate sector costs during a period of structural change
11 that is creating global demand for many of the same products and services.

12 **Q26. Based on recent changes in both the customer growth considerations and electricity**
13 **sector costs, are historic trends indicative of future trends?**

14 A26. No. While the broader economy may revert to historical growth rates, inflation, and interest
15 rates, the same cannot be said for the electricity sector. The underlying fundamentals
16 driving structural change in the electricity sector are expected to persist for decades,
17 resulting in a step-change in customer growth factors and sector costs. After a thorough
18 review of economic and demographic indicators, I am confident that in the absence of any
19 unforeseen and unlikely circumstances, recent rises in electricity sector costs and customer
20 growth in Alberta will continue through the Second Period.