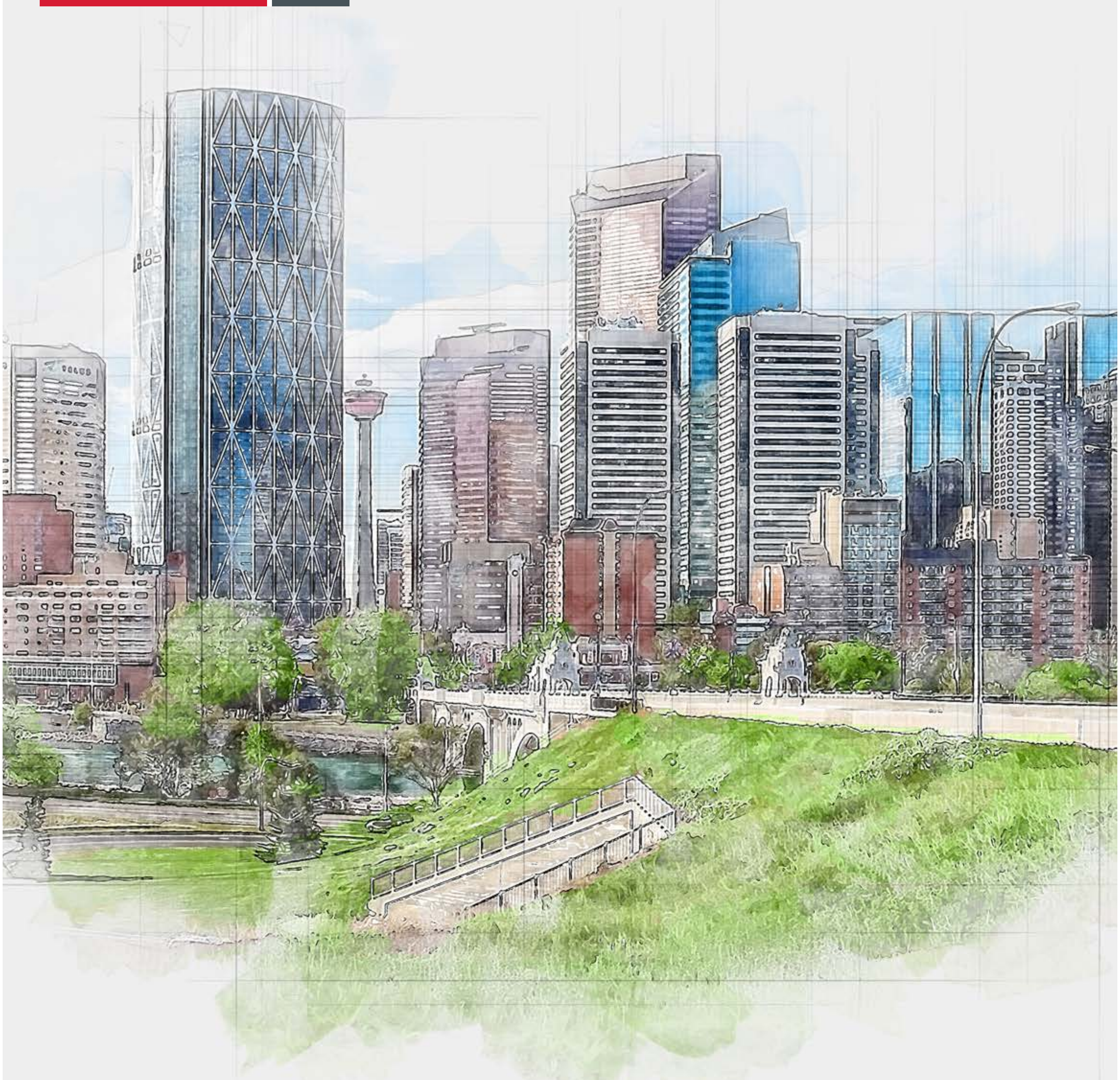
SPRING 2024



CALGARY AND REGION ECONOMIC OUTLOOK

2024-2029

calgary.ca/economy

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Introduction

The City of Calgary tracks economic indicators throughout the year to develop insights about the impacts of external events on the local economy. The results are published in the Economic Outlook semi-annually in the spring and fall. The results and report are available to the public.

The timing of the release of The City's Spring Economic Outlook is late April every year. The timing is the result of several dependencies. For example, it typically follows and incorporates insights from a spring release of the Government of Alberta budget. The late April timing also ensures that a complete set of historical values, including those for the previous year and the first quarter of the current year, are incorporated into the forecast. Many of these values are attributable to several external agencies that complete their work in mid-April.

Purpose

The Spring 2024 Economic Outlook supports The City's financial and physical planning. It provides a reasonable basis for decision-making by outlining and clarifying the economic opportunities and threats facing the Calgary Economic Region. The outlook considers several economic indicators. The choice of indicators reflects factors deemed likely to affect local economic performance over the forecast period.

Plan

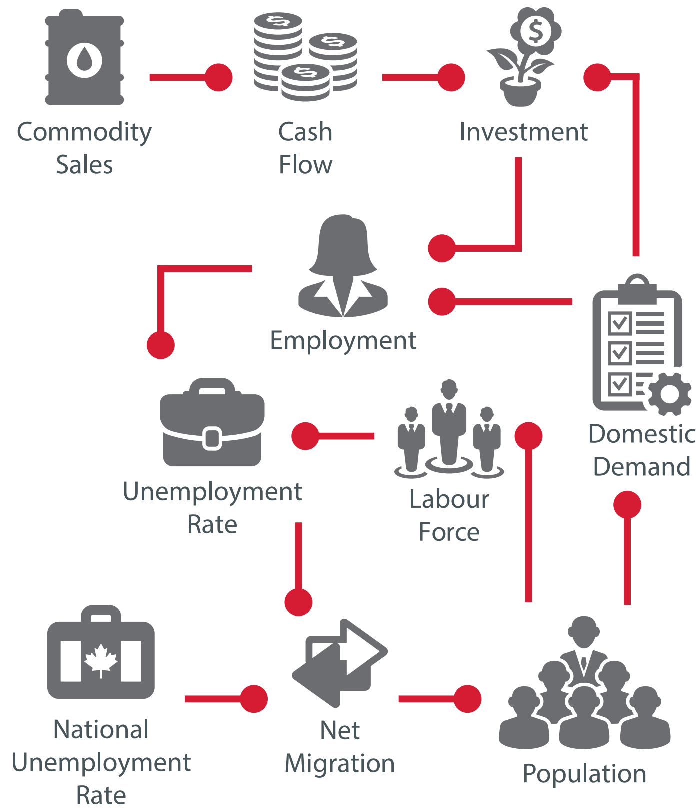
There are two areas or economies of interest: the local (or city of Calgary) economy, and the regional economy (Calgary Economic Region or CER).

The CER is a small open economy affected by changes outside its borders. Consequently, external influences from the provincial, national and world economies get transmitted to the local and regional economies. Outside factors judged to have a substantial impact get presented as forecast assumptions. Most national and international forecast estimates in the assumptions section reflect the average expectations of private sector forecasters. That's unlike all the CER or City forecast estimates that are the output of City of Calgary forecast models validated by private sector forecasts.

The economic cycle for commodity-based regions helps to inform projections of economic activity in the CER. The level of crude oil sales affects the cash flow of Alberta's energy industry and investment in the local economy. A summary of the path from crude oil sales to increased domestic demand is available in the chart below. The Spring 2024 Economic Outlook uses assumptions about changes in the path for the 2024 to 2029 period as follows:

- Deceleration of inflation in global markets and near-term resilience in global economic prospects;
- Significant energy industry cashflows after robust exports last year attracted many migrants; and
- A significant drop in investment levels as businesses exercise caution in the face of economic uncertainty.

Transmission from Strong Commodity Performance to Strong Economic Performance



Payoff

The Spring 2024 Economic Outlook provides comprehensive estimates of the future conditions for Calgary's local and regional economies. Like the work of alternative forecast providers, it uses theoretical and empirical economic underpinnings. However, unlike the work of alternative forecasters, it provides the complete set of indicators requested by local decision-makers for the city and CER.

Finally, it tackles key recurring questions posed by City of Calgary decision-makers:

- What is the overall forecast for the growth rate in the local economy?
- What are the drivers of local economic performance?
- How many jobs is the local economy expected to create?
- What is the forecast for population growth in the city and region?
- What is the expected inflation rate?
- What are the implications, especially for municipal finance?

Executive Summary

1. The start of the Trans Mountain Pipeline Expansion (TMX) should boost crude oil capacity and narrow the WTI-WCS differential, consequently enhancing Alberta's energy sector cash flows

Following a mixed performance in 2023, the oil and gas sector is prepared for substantial gains in 2024. Oil output in the province reached an all-time high in December 2023, driven by producers overcoming earlier struggles and adjusting production for the completion of the much-anticipated Trans Mountain Pipeline expansion. Proposed federal government climate policies, such as emissions caps on the oil and gas sector, could hinder future output increases and impact various aspects of the economy, including investment and government revenues. Producers are expected to focus their investment toward optimizing current production infrastructures and redirect a portion of their spending toward greenhouse gas emissions reduction, either by investing in lowering emission intensities or purchasing carbon offsets.

In 2024, the price of West Texas Intermediate (WTI) crude oil is predicted to average U.S.$77/bbl, unchanged from last year, and U.S.$75/bbl in 2025. The price of Alberta's Western Canadian Select (WCS) crude oil should hover around U.S.$58/bbl in 2024, virtually unchanged from the U.S.$59/bbl reached in 2023 and increase to U.S.$60/bbl in 2025. Work on the Trans Mountain Pipeline Expansion is expected to conclude in the first half of 2024, expanding the current 1,150-kilometre pipeline between Strathcona County, Alberta and Burnaby, British Columbia. This expansion will create a twinned pipeline that will almost triple the nominal capacity of the system from 300,000 barrels per day to 890,000 barrels per day. The addition will increase the value of Canadian oil by unlocking access to world markets where higher prices are paid for oil, resulting in greater tax revenue for Canada. It will enable producers to capture an additional $73.5 billion in revenues by narrowing the price differential between the WTI and WCS, which is currently hovering around U.S.$18/bbl.

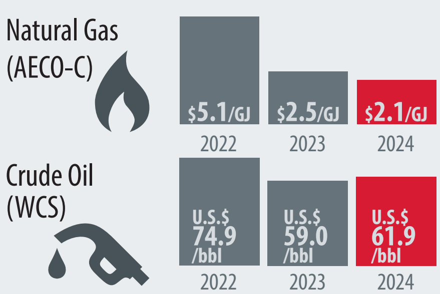
Although energy prices are forecast to trend down in 2024, upward price pressures exist due to geopolitical uncertainties and weather shocks. The potential escalation of the Israel-Hamas war to the wider Middle East region, especially with the recent Iranian strikes in Israel, continued attacks in the Red Sea and the ongoing war in Ukraine could impact global oil supply and prices. More extreme shocks could also cause extra price volatility.

Although the start of 2023 experienced a rare winter injection, 2024 was characterized by frigid polar weather which slammed into North America. Colder-than-average temperatures led to large natural gas withdrawals from storage, easily overshadowing 5-year highs. As temperatures moderated in February, withdrawals quickly retraced and are now substantially less than the 5-year average. Storage levels are currently trending above 5-year highs.

Amidst depressed prices, North American production was robust, especially in Permian Basin natural gas, which saw a 12 per cent increase in production. Overall, production in both the U.S. and Canada rose by 4 per cent and 2 per cent, respectively, in 2023. Gas rig activities in the U.S. were 5 per cent lower in 2023 compared to 2022, while Canadian activities increased by 10 per cent, according to Baker Hughes.

Given ample inventory and forecasted mild weather, it is expected that AECO prices will remain similar or slightly lower compared to 2023, with an average of $2.20/GJ for 2024. For the mid-term outlook, prices are anticipated to rebound as the oversupply moderates and the economy recovers, with prices forecasted to be $3.20/GJ in 2025 and $3.80/GJ in 2026.

Energy Prices



The **WCS oil price is expected to remain strong**, thanks to the completion of the Trans Mountain pipeline, while **the AESO-C price is projected to decline** due to mild weather and ample storage levels.

Canada/U.S. Exchange Rate

U.S.$ for 1 C$

2025-2029 Average	**0.76**	2023	**0.74**
2024	**0.75**	2022	**0.77**

The **exchange rate** between U.S. and Canadian dollars is expected to remain stable in the current cycle. This should support trade as trading partners benefit from improved price certainty.

GDP Growth Comparison

Real GDP growth rate for the CER should should exceed the provincial, Canadian, and U.S. economic performance, supported by energy industry investments.

Calgary CER	**2.3%**
Alberta	2.3%
Canada	0.7%
U.S.	2.0%
World	3.2%

2. Strong net migration in Calgary is expected to drive the construction and owner-occupied housing industries, while expected increase in housing supply should aid in the deceleration of average resale house price appreciation in 2024

The need for companies to fulfill the significant demand from net migration and the lifting of pandemic limitations resulted in record-high job openings, causing the labour market to heat up over the last year. But since then, the labour market has significantly cooled off as company expansion is impeded by a combination of high inflation and high lending rates.

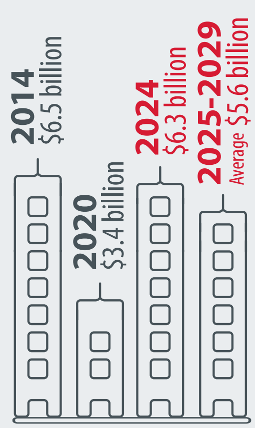
The underlying trend in Calgary's labour market is not an unwillingness to hire; hiring has been stronger than expected to start the year. Statistics Canada reported that the CER added nearly 50,000 jobs between March 2023 and March 2024, which is quite impressive. The fundamental problem is that hiring is not keeping up with Calgary's rapid population growth, which pushes CER unemployment rates upward even in the face of substantial hiring. For example, despite months-long increases in employment, the unemployment rate in the Calgary Census Metropolitan Area (CMA) climbed for the third consecutive month in March, rising from 5.3 per cent in December 2023 to 6.4 per cent in March of this year.

Overall, current labour market trends indicate a significant rise in Calgary's unemployment rates. We expect the CER unemployment rate to rise from 6.0 per cent in 2023 to 6.6 per cent in 2024 as strong net migration dwarfs the number of job openings. This is expected to trend downwards in 2025 as the combination of lower interest rates and lower inflation improves demand and business expansion. Employment growth in 2024 and 2025 is expected to remain fairly like last year, recording an approximately 2.6 per cent growth rate in both years. Growth this year is expected to be driven by the accommodation and food services and transportation and warehousing industries.

Employment in the construction industry is expected to increase this year. However, some underlying concerns remain about the availability of enough construction workers to meet residential and non-residential construction demand. Employment in the healthcare industry has also been on a downward trend since last year.

Higher borrowing costs due to the Bank of Canada's efforts to tackle inflation in 2023 contributed to an all-structure-house price growth deceleration in 2023, though the impact was uneven across housing structure types. The average house price across all-structure types was $539,313, an annual appreciation of 4.3 per cent in 2023 compared to 4.9 per cent in 2022. Despite the single digit average resale house price deceleration in appreciation of all-structure types, row housing structures experienced an annual 14.1 per cent appreciation in 2023 compared to 9.6 per cent in 2022, while apartment structures saw an annual appreciation of 8.1 per cent, up from 6.2 per cent experienced in 2022. The house price appreciation and acceleration experienced amongst these two categories of housing structure types was caused by a change in housing preferences driven primarily by affordability. Single-family average resale house price reached $719,811 in 2023, an annual appreciation of 9.8 per cent compared to 12.1 per cent annual appreciation in 2022, principally slowed by higher borrowing.

Calgary Building Permits



The **residential building construction investment** is expected to reach $4.4 billion in 2024, approximately 70 per cent of total building construction intentions.

Calgary (CMA) Housing Starts

Housing investments in the Calgary CMA are expected to be higher in the current budget cycle, driven by strong population growth from international and interprovincial net migration.

Prime Business Loan Rate

Interest rates will stay elevated in the current cycle. Higher **financing costs** should weigh on business investment incentives and consumer spending in Canada.

2022
4.2%

2023
6.8%

2024
6.4%

2029
4.6%

3. Calgary's labour market is showing signs of easing. However, longer term the Calgary Economic Region (CER) may experience occupational hiring challenges

Calgary's labour market has shown signs of tightening since 2021, as post-pandemic demand for goods and services led to a rise in worker demand, creating labour scarcity. Job vacancies saw a significant spike, reaching a record high in 2022. The unemployment rate also continuously declined during this period as hiring picked up.

The sudden surge in demand and rising vacancies led the Government of Canada to embark on setting immigration targets to boost labour supply. This, combined with tightening monetary policy, is starting to cool down the labour market. Recent evidence shows that the labour market is beginning to ease. The CER job vacancy rate fell for the sixth consecutive month, recording a 3.4 per cent growth rate to the end of 2023. The current business climate and the reluctance of businesses to boost their payrolls are other contributing factors to the slowdown in job vacancy rates. A significant contributor to the easing of the labour market can be traced to the construction, accommodation and food services industries.

The number of job seekers is expected to exceed the number of job openings between 2023 and 2026 as net migration reaches record highs. This is expected to reduce the number of job vacancies accumulated since 2022, reducing cumulative imbalances (shortages) within the current budget cycle. Projected job seekers will mainly comprise of international immigrants and young people entering the labour force.

The next budget cycle (2027-2030) will see a slightly different trend. The combination of economic expansion as interest rates fall and the need to replace workers due to retirement is expected to lead to a surge in job openings and a slowdown in job seekers. As a result, some cumulative imbalance (shortage) challenges are expected to persist in critical occupations.

International immigration to Alberta should stay strong in the medium term due to the Government of Canada's 2024-2026 Immigration Levels Plan, while non-permanent migration from international students and temporary foreign workers is more likely to slow down. Strong population growth from net migration into the province is helping to fill job vacancies and improve employment. However, the net migration spike will not immediately translate into higher labour force participation and employment levels. It will take time to mitigate the discrepancy between skills and jobs. Alberta's tight labour market is expected to see further relief in the forecast period. However, there are risks that some industries will continue to face hiring challenges, especially for occupations requiring more specialized training.

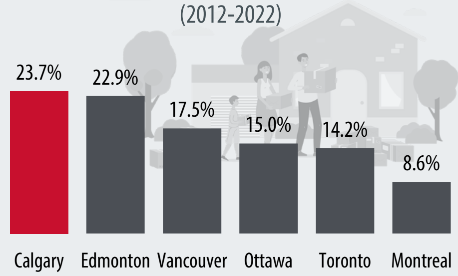
4. Overall, inflationary pressure appears to be on the rise in Calgary and Alberta while prices are rising at a slower pace at the national level

Consumer prices in the Calgary Census Metropolitan Area (CMA) rose by 3.8 per cent in 2023, while prices at the national average edged up by 3.9 per cent. The deceleration of inflation growth in 2023 was primarily driven by the Bank of Canada's contractionary monetary policy, specifically the successive rate hikes.

Ten-Year Population Growth

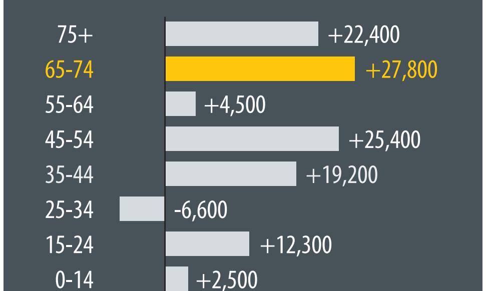
Calgary's population growth has outpaced other major Canadian cities in the past ten years. The trend is expected to continue in 2023, with solid growth from international and interprovincial **net migration**.

Total Population Growth of Canadian CMAs (2012-2022)



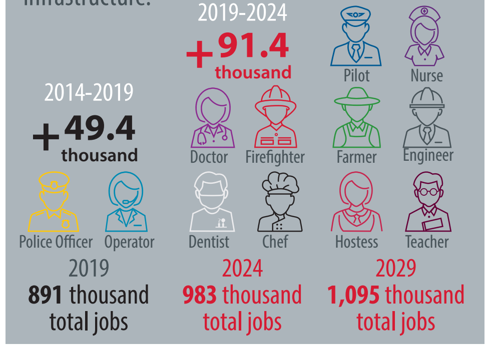
Population Increase by Cohort

The 10-year **middle-aged cohorts** ages 35 to 44 years and ages 45 to 54 years should experience a solid increase over the forecast period, outpacing the growth of cohorts of youth while lagging behind the growth of senior cohorts.



Five-Year Job Growth

The **employment growth** rate in the Calgary Economic Region is expected to remain strong in this cycle, continuing to create solid demand for City services and infrastructure.



Despite the overall slowdown in inflation, there are several factors that continue to drive inflation in Calgary and Alberta:

- Alberta's population has been growing at an unusually fast pace since 2021, driving demand for shelter. Low affordable housing supply is causing a rise in shelter costs. For February 2024, the cost of renting in Calgary rose by 15 per cent, the fifth consecutive month of double-digit growth. This also ranked Calgary's rental costs as the fastest growing in Canada.
- The shortage of construction workers has exacerbated inflationary pressure, delaying the completion of several housing developments and other construction projects due to a competitive real estate market along with elevated prices.
- Gasoline prices surged at the beginning of 2024 as the Government of Alberta reinstated the gasoline fuel tax at $0.13 per litre, which was suspended for 2023.
- The projected increase in the federal carbon tax to start the second quarter of this year will likely provide support to gasoline costs and natural gas price.
- Electricity prices across Alberta have also seen an increase in prices as the end of Alberta's energy rebate program and higher energy prices have led to a rise in utility costs.

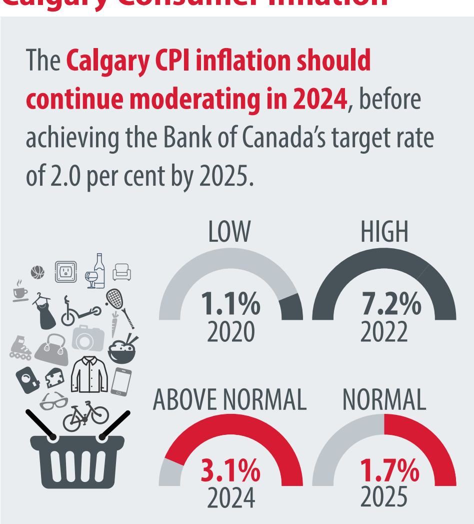
On 2024 March 18, Council directed City Administration to design and implement a revised Local Access Fee (LAF) methodology that aligns with a "quantity only" model. This method ties the LAF revenue to the quantity of energy consumed and does not include a measure of the underlying commodity price. As such, LAF revenue under quantity only is unaffected by fluctuations in the Regulated Rate Option (RRO) or the Gas Cost Flow-through Rate (GCFR) and is therefore more stable and predictable for both The City and Calgary ratepayers. Design principles are to be incorporated in the quantity only LAF methodology so that it results in more stable/predictable revenue while supporting the affordability concerns of Calgarians and businesses.

Generally, we expect consumer prices in the Calgary CMA to decelerate from 3.8 per cent in 2023 to 3.1 per cent in 2024, still above the Bank of Canada's 2 per cent inflation target. High population growth in Calgary is expected to exert upward pressure on the demand for food, shelter and energy, consequently keeping consumer prices elevated. As inflation is expected to decelerate, monetary policy may start to loosen, providing opportunities for business and economic expansion through increased investments. Municipal and provincial attempts to increase affordable housing over the next few years are aimed at providing relief in the rental and ownership markets, tapering off inflation.

The forecast assumes energy and commodity prices will decline in 2024 and 2025, and interest rates will ease in major economies. Any deviation from these assumptions will cause adjustments to the forecast results. Faster disinflation can lead to improving business and consumer incentives and increased growth. Greater-than-expected inflation persistence may cause central banks to delay rate cuts and hinder growth. Overall, the risks to the outlook for inflation are balanced.

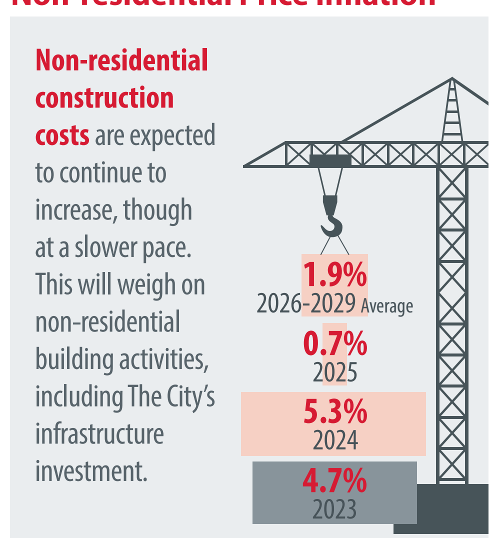
Though inflation in Canada has been decelerating, there are risks that the progress toward the inflation target could be prolonged. If consumers and businesses continue to expect inflation to stay elevated, this could impact prices and real wage growth rates, as well as household spending and business investment incentives. Further, if wage growth continues to outpace productivity growth, this could translate into additional inflationary pressure. Downside risks exist on Canadian economic activity if inflation remains elevated for longer. Household wealth and business incentives could further dampen, resulting in larger output losses.

Calgary Consumer Inflation



Alberta Wage Inflation

Non-residential Price Inflation



Forecast Implications

Averages: Previous vis-à-vis Current City of Calgary Service Plans and Budget Cycle

Economic Indicator	Estimate Previous Service Plans and Budget Cycle [2019-2022] Annual Average	Forecast Current Service Plans and Budget Cycle [2023 to 2026] Annual Average	Forecast Implications
Assumptions			
World			
Real Gross Domestic Product Growth (%)	2.3	3.1	The average growth of world GDP is expected to be higher for the current service plans and budget cycle than the previous one. With decelerating global inflation and steady growth, the likelihood of a hard landing has decreased. The resilience in the global market should have a positive impact on consumer confidence and spending in Calgary.
The United States			
Real Gross Domestic Product Growth (%)	1.9	2.0	The U.S. economic growth is expected to improve slightly in this cycle driven by higher productivity and strong labour market performance. This should support the demand for Canadian exports. Canada's energy exports are expected to outperform non-energy exports.
Canada			
Real Gross Domestic Product Growth (%)	1.4	1.5	Canada's economy should be supported by population growth and household spending. The average rate of economic growth in Canada will be higher in this cycle than in the previous one, supporting interprovincial trade.
Prime Business Loan Rate (%)	3.3	5.9	Interest rates will stay elevated in the current cycle. Higher financing costs should weigh on business investment incentives and consumer spending in Canada.
Exchange Rate (U.S.$ for 1 C$)	0.77	0.75	The exchange rate between U.S. and Canadian dollars is expected to remain stable in the current cycle. This should support trade as trading partners benefit from improved price certainty.
Alberta			
Real Gross Domestic Product Growth (%)	0.6	2.3	Alberta's economic performance is expected to be significantly stronger during 2023-2026 compared to the previous cycle. The City benefits from the Province's improved fiscal situation and strong growth.
Total Employment Growth (%)	1.2	2.6	Alberta should expect strong employment growth and tight labour market conditions in this cycle. Employers in Calgary will have a more challenging time finding workers and competing against the rest of the province.
Unemployment Rate (%)	8.1	6.4	A lower unemployment rate in the 2023-2026 cycle leads to reduced demand for social assistance programs from The City as the number of unemployed persons declines.
Housing Starts ('000 units)	29.9	35.8	Strong population growth in Alberta supports housing demand and residential investment in the current service plans and budget cycle, which should contribute to economic growth within the province.
Inflation Rate – Consumer Price Inflation or CPI (%)	3.1	2.3	With the tightening monetary policies and the pullback in input costs, inflation is expected to moderate in the current cycle. This should reduce pressure on City expenditures.
West Texas Intermediate - WTI (U.S.$/bbl)	64.8	76.7	Crude oil price volatility continues into 2024. This prompts The City to continue to explore countercyclical fiscal policy options to help moderate the impact of price volatility and economic fluctuations. Oil prices will remain elevated in this cycle compared to the previous one.
Western Canadian Select - WCS (U.S.$/bbl)	50.1	60.5	Improved transportation capacity and expanded access to markets should help reduce the price difference between the WCS and WTI. This should enhance the energy sector's cash flow and support the provincial and local economy.
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.1	2.9	Natural gas prices are expected to average lower in this cycle than in the previous one. This will moderate operational costs for businesses and household costs of living. Although this will impact franchise fees for The City from natural gas, operating expenditures for some City services will decrease.
Industrial Product Price Index (%)	6.6	0.2	Prices for industrial products are expected to decrease from their mid-2022 peak in this service plans and budget cycle, resulting in a lower average of price growth in 2023-2026. This should moderate the inflationary pressures for The City.
Raw Materials Price Index (%)	11.4	-2.4	Raw material prices are expected to decline in this cycle from the price spike experienced in 2021-2022, which should reduce cost pressures for businesses.
Alberta Average Annual Wage Rate Growth (%)	1.7	3.1	Higher wage growth in the current cycle will raise incomes and improve affordability. However, it will also increase the labour cost, contributing to the inflationary persistence within the province and The City.

Averages: Previous vis-à-vis Current City of Calgary Service Plans and Budget Cycle

Economic Indicator	Estimate Previous Service Plans and Budget Cycle [2019 to 2022] Annual Average	Forecast Current Service Plans and Budget Cycle [2023 to 2026] Annual Average	Forecast Implications
Forecast			
Calgary Economic Region (CER)			
Real Gross Domestic Product Growth (%)	1.1	2.7	Calgary Economic Region should expect solid economic growth in the current service plans and budget cycle, supporting the resilience of the property tax base.
Total Employment ('000 persons)	882.7	994.4	Strong job growth will expand the consumer base, increasing demand for housing and goods and services in the region.
Total Employment Growth (%)	2.1	2.5	The employment growth rate is expected to remain strong in this cycle, continuing to create solid demand for City services and infrastructure.
Unemployment Rate (%)	8.4	6.2	Lower unemployment rates in this cycle should increase competition for skilled workers and reduce the demand for social services that support the unemployed. The tightness and mismatch in skillsets in the labour market will increase pressures on labour costs for The City.
Calgary Census Metropolitan Area (CMA)			
Housing Starts ('000 Units)	13.4	19.6	Housing investments in the Calgary area are expected to be higher in the current budget cycle. Strong population growth from international and interprovincial net migration should support solid housing starts in the Calgary CMA.
Inflation Rate - CPI (%)	3.2	2.6	Consumer price inflation is expected to moderate in this cycle. Prices will stay at a relatively elevated level compared to pre-pandemic. Moderation of the costs of goods and services helps mitigate the risks of cost overruns and budget adjustments.
Non-Residential Building Price Inflation (%)	3.9	3.2	Non-residential construction costs are expected to continue to increase, though at a slightly decelerated pace in this cycle. This will weigh on non-residential building activities, including The City's infrastructure investment.
City of Calgary			
Real Estate			
Residential Market			
Housing Starts ('000 Units)	11.5	16.7	Stronger residential construction activity in the current cycle should support increases in the residential tax base, development and building permit activity and demand for the continued expansion of City infrastructure.
Calgary Average Residential MLS® Sale price (%)	2.1	4.5	Home affordability in Calgary will remain challenging for new housing market entrants as housing prices continue to grow in the current cycle. This should stimulate the supply of new housing units and shift the demand across different housing structure types.
Benchmark Home Price Growth (%)	5.1	4.6	Benchmark home price growth should also stay elevated in this cycle. This is driven by strong demand for shelter from population growth and increasing residential building costs. The increasing shelter costs will weigh on the affordability of Calgarians.
Total Building Permits ($ billions)	4.9	5.8	Higher building permit values in the current cycle will lead to a broader property tax base, higher revenues and demand for services.

Numbers may not add up due to rounding.

Forecast Risks

Risks arising from activities in the Rest of the World:

Major factors that could alter actual economic performance include a slightly improved global GDP outlook, uncertainties in global commodity prices and inflation and potential improvement of global productivity.

1

Global GDP Outlook

The forecast risks for a hard landing of global GDP growth **receded slightly**. Slightly higher growth is expected for 2024 than earlier expected in Fall 2023, but growth remains below the historical average of the past two decades. The slowdown is more pronounced in advanced economies than in emerging market and developing ones. Within advanced economies, the U.S. surprised on the upside, with resilient consumption and investment, while euro area activity was revised downward. Many emerging market economies proved quite resilient and surprised on the upside, with the notable exception of China, facing growing headwinds from its real estate crisis and weakening confidence.

2

Global Commodity Prices and Inflation

The forecast assumes energy and commodity prices will decline in 2024 and 2025, and interest rates will ease in major economies. Any deviation from these assumptions will cause adjustments to the forecast results. Faster disinflation can lead to improving business and consumer incentives, increasing growth. Greater-than-expected inflation persistence may cause central banks to delay rate cuts and hinder growth. Overall, the **risks to the outlook for inflation are balanced**.

3

Global Productivity and Divergence

The rapid development of artificial intelligence (AI) could **boost productivity, albeit in an uneven way across the global economy**. Advanced economies will benefit more and faster from AI advancements due to their more educated workforce, higher knowledge intensity, and readiness for regulation frameworks. Less developed economies lack these advantages and may not benefit as fast from AI, or even experience some disruptions. This could intensify diverging global productivity and income inequality.

Risks from market conditions and policy differences across Canada:

Significant factors that could alter actual economic performance include the progress of inflation deceleration to its target range, uncertainties in consumption demand and environmental policy divergence that creates ambiguity in business investment.

4

The Progress of Inflation Deceleration

Though inflation in Canada has been decelerating, there are risks that the progress toward the 2 per cent inflation target could be prolonged. If consumers and businesses continue to expect inflation to stay elevated, this could impact prices and real wage growth rates, as well as household spending and business investment incentives. Further, if wage growth continues to outpace productivity growth, this could translate into additional inflationary pressure. **Downside risks exist on Canadian economic activity** if inflation remains elevated for longer. Household wealth and business incentives could further dampen, resulting in larger output losses.

5

Canadian Consumption Demand

Canada's population growth has been strong due to robust net migration of permanent and non-permanent residents. This has supported **Canadian consumption demand** across a broad range of goods and services. On the other hand, many Canadian households are heavily in debt and facing upcoming mortgage renewals. This could put **downward pressure on consumption demand** as consumers become more cautious, especially with goods and services that are sensitive to interest rates.

6

Environmental Policy Coherence vis-à-vis Divergence

Environmental policy divergence exists between municipal, provincial, and federal governments. This will create **uncertainty and ambiguity, therefore, downside risks to business investment**. The heightened tensions should continue to exist between different orders of governments on environmental policy and the pace of policy implementation. The proposed Clean Electricity Regulation is a good example. Uncoordinated incentives from policymakers will drag down the efficiency of the green transition and make the future of environmental policy across governments ambiguous.

Risks from potential changes in Alberta's provincial economy:

Significant factors that could alter actual economic performance include the uncertainties associated with oil and natural gas prices and exports, migration and demand for housing and infrastructure services, and labour market balance.

Oil and Natural Gas Prices and Exports

Though energy prices are forecast to trend down in 2024, upward price pressures exist due to geopolitical uncertainties and weather shocks. The potential escalation of the Israel-Hamas war to the wider Middle East region, especially with the Iranian strikes in Israel, continued attacks at the Red Sea, and the ongoing war in Ukraine could impact global oil supply and prices. More extreme shocks could also cause extra price volatility. For Alberta's energy production and exports, **the oil and gas sector investment and exports should be robust in the forecast period**, supported by healthy cashflows and improving transportation capacity.

The Level of Net Migration

International immigration to Alberta should stay strong in the medium term due to the federal 2024-2026 Immigration Levels Plan, while non-permanent migration from international students and temporary foreign workers is more likely to slow down. The rapid growth of net migration and the challenges of planning and preparation to accommodate have created housing supply and housing affordability issues, shortfalls in infrastructure and services, and falling GDP per capita with a surging population. Higher net migration levels beyond those incorporated in the forecast should **further boost the population growth** in Alberta **yet amplify the existing challenges**.

Labour Market Balance

Strong population growth from net migration into the province is helping fill job vacancies and increase employment. However, the net migration spike will not immediately translate into higher labour force participation and employment levels. It will take time to mitigate the discrepancy between skills and jobs. **Alberta's tight labour market is expected to see further relief in the forecast period**. However, there are risks that some industries will continue to face hiring challenges, especially for occupations requiring specialized training.

Risks from local and regional private and public sector influences:

Factors that could alter economic performance include the uncertainty associated with normalizing business pricing behaviour and improved investment environment, weakening consumer confidence and spending activities and labour cost escalation.

Business Pricing and Investment

More businesses are normalizing pricing behaviours after the pandemic. Fewer businesses are expecting to increase their prices more often than normal, and the trend is likely to continue. However, many Calgary businesses are still cautious of the overall business environment and prudent with their investment decisions. Should borrowing costs moderate and credit conditions improve, there **should be improvements in business incentives during the forecasting period**.

Consumer Confidence and Spending

Many Calgarians are facing record-high household debt levels. Elevated interest rates have been weighing on consumer confidence and consumption activities. Mortgage renewals in 2024 and high debt servicing costs will impact household spending decisions in Calgary. Should the interest rate persist longer, **consumers could become more cautious and cut back residential expenditures more than projected**. This could also impact business incentives and slow down business investment.

Labour Cost Escalation

Labour cost growth in Calgary remains elevated, with uneven distribution across industries and occupations. For industries with labour shortages, real wages are expected to grow relatively faster, including construction, retail trade, education, and accommodation and food service industries. A higher real disposable income should help improve households' purchasing power and affordability. However, higher wages also indicate higher labour costs for both private and public sectors. There are risks of **upward pressures on cost-push inflation**.

Forecast

THE BROADER CALGARY ECONOMY

The Sources of Economic Growth in Calgary

As broad macroeconomic headwinds across Canada linger, Calgary's economy faces some challenges. Tighter monetary policy continues to constrain consumer and business spending. In addition, high net migration drives housing demand, increasing real estate prices and reducing affordability. Increasing shelter costs, particularly rent, continue to drive inflationary pressure, decreasing affordability. For context, Calgary's rental inflation has been the highest across major cities in Canada since the year began, rising by 15.3 per cent in February 2024 year-over-year.

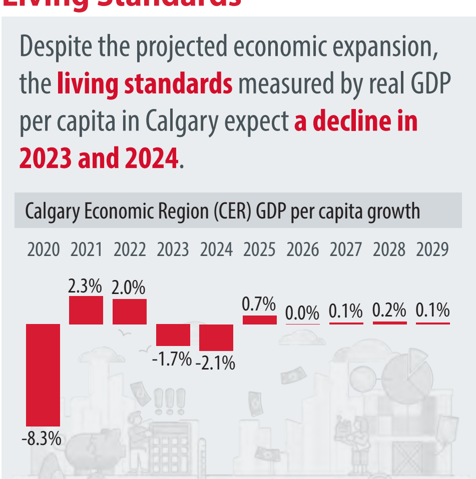
Despite these headwinds, there are some observations that provide optimism within this macroeconomic climate, granting some protection to economic growth within the Calgary Economic Region (CER):

1. **Real estate demand:** The construction and real estate industry is expected to be a significant contributor to Calgary's economic growth this year as robust population growth continues to increase the demand for housing. Alberta's population grew by 4.1 per cent in 2023, significantly above the national average of 3.0 per cent that same year. With more people moving into the region relative to the rest of Canada, the resale market in Alberta is as competitive as it has ever been because of low inventory. The increased competition is gradually eroding housing affordability. Residential investment is projected to rise in Calgary as efforts are underway to generate enough supply to meet the current elevated housing demand. This is expected to significantly boost the construction, owner-occupied housing, and rental and leasing industries.
2. **Stable commodity prices and export capacity:** Access to provincial energy markets will provide some stability to the regional economy. The Trans Mountain Pipeline (TMX) project is expected to be completed by May this year, with the first exports flowing through a month later. The $30.9 billion project is expected to add approximately 600,000 barrels daily to the pipeline. Higher pipeline capacity is expected to give the energy industry the capacity to ramp up output and raise prices, narrowing WTI-WCS spreads in the process. The Coastal GasLink project has also been completed. It is expected to transport natural gas from Northeastern British Columbia to export facilities on the West Coast, improving market access and production in the process.
3. **Robust employment growth:** Job vacancies remain elevated despite businesses cutting spending in response to tighter monetary policy. Job vacancies remain particularly high in the construction, accommodation and food services industries. Population growth has continued to provide some support in resolving the current labour market imbalances. With another year of net solid migration expected in 2024, job vacancies will fall as newcomers moving to the CER help fill some of these vacant positions. As a result, employment growth in the CER is expected to be higher than the national average. On a less positive note, the unemployment rate within the region is expected to be higher than the national average during the forecast period, as it will take time for the region to absorb newcomers into areas of high demand properly.

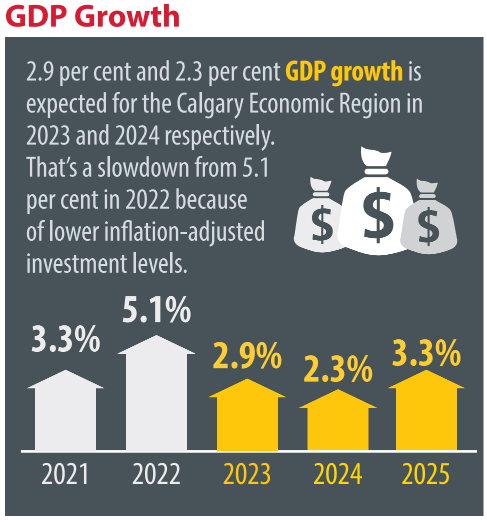
Strong net migration in Calgary is expected to drive the construction and real estate.

Real GDP in the CER is forecast to have grown by 2.9 per cent in 2023 and expected to expand by 2.3 per cent in 2024. Cities in Alberta are expected to record higher economic growth than the national average as commodity prices and oil and gas investments insulate the province from macroeconomic headwinds. In addition, the demand for homes to accommodate the number of people moving to Calgary (with Calgary's relative housing

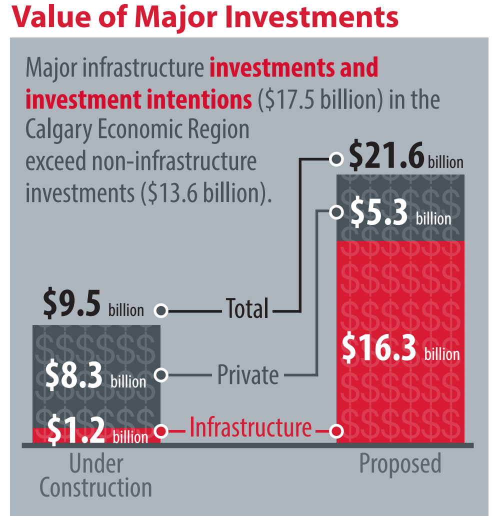
Living Standards



GDP Growth



Value of Major Investments



affordability being one of the primary reasons) is expected to drive an expansion in the construction and owner-occupied housing industries. In addition, current market sentiment indicates that the Bank of Canada will likely start trimming down the overnight rate late in the second half of the year. This is expected to contribute to residential investments and further tighten resale markets. However, per capita GDP growth is expected to see a significant fall as population growth over the next couple of years outweighs GDP and employment growth.

Calgary's economic growth is expected to accelerate to 3.3 per cent in 2025 and average 2.3 per cent between 2026 and 2029, as expected interest rate cuts reduce business costs and boost investment.

Strong net migration and a slowing economy are expected to put upward pressure on the unemployment rate despite stable hiring.

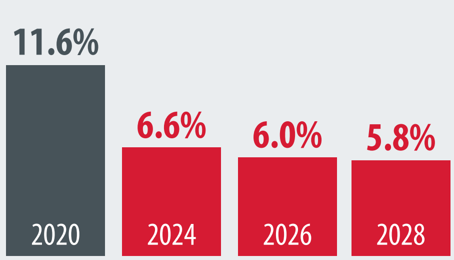
The past year saw strong labour markets as employers sought workers to fill the record-high job openings to meet strong demand from net migration and the removal of pandemic restrictions. However, the labour market has cooled off considerably since then as the combination of high interest rates and high inflation limits business expansion.

The underlying trend in Calgary's labour market is not an unwillingness to hire. Hiring has been stronger than expected to start the year. Statistics Canada reported that the CER added nearly 50,000 jobs between March 2023 and March 2024, which is quite impressive. The underlying issue is that hiring is not strong enough to keep up with the rapidly growing population, placing some upward pressure on CER unemployment rates despite solid hiring. To illustrate, the Calgary CMA's unemployment rate has increased for the third consecutive month from 5.3 per cent in December last year to 6.4 per cent in March this year, despite consecutive months of employment growth.

Overall, current labour market trends indicate a significant rise in Calgary's unemployment rates. We expect the CER unemployment rate to rise from 6.0 per cent in 2023 to 6.6 per cent in 2024 as strong net migration surpasses the number of job openings. This is expected to trend downwards in 2025 as the combination of lower interest rates and lower inflation improves demand and business expansion. Employment growth in 2024 and 2025 is expected to remain fairly similar to last year, recording an approximately 2.6 per cent growth rate in both years. Growth this year is expected to be driven by the accommodation and food services and transportation and warehousing industries.

Employment in the construction industry is expected to increase this year. However, some underlying concerns remain about the availability of enough construction workers to meet residential and non-residential construction projects. Employment in the healthcare industry has also been on a downward trend since last year.

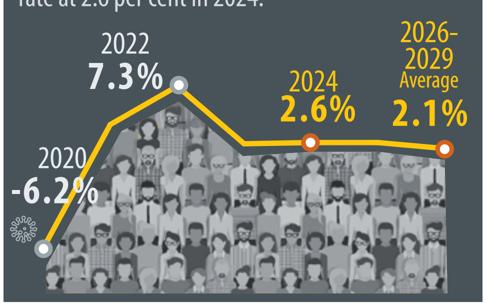
Unemployment Rate



The **unemployment rate** should deteriorate in 2024 as the labour market starts to loosen.

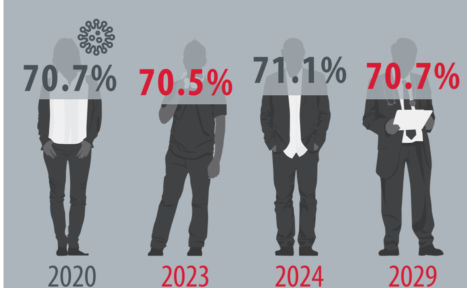
Annual Job Growth

After a COVID-19-driven job decline in 2020, **annual job growth rebounded significantly but is now decelerating**. After the 7.3 per cent high for 2022, job growth decelerated to 2.5 per cent in 2023 and is expected to maintain a similar rate at 2.6 per cent in 2024.



Labour Force Participation

The **labour force participation rate** is expected to trend upwards in 2024. Over the long term, the rate is expected to trend down as baby boomers exit the workforce.



The Contribution of Private and Public Investments and Impact on Construction Inflation

Investment – Investment Intentions and Prospects

Investment growth across Alberta surprisingly remained stable. With the Bank of Canada's monetary policy putting significant upward pressure on interest rates and business costs, there was the expectation that investments would see a drop. This has not been the case, as recently released numbers from Statistics Canada show investments have remained surprisingly robust. Investments within the oil and gas industry have remained strong due to stable energy prices and projected export capacity growth. Investments in the manufacturing industry have also remained strong as foreign demand has been better than expected.

In our Fall 2023 Economic Outlook , we highlighted significant capital projects that are expected to boost the local economy. Construction on the Calgary Events Centre project, valued at $1.2 billion, is set to begin this year. The Future Energy Park Renewable Natural Gas and Ethanol Project, valued at $1.2 billion, will be North America's largest carbon-negative renewable natural gas and ethanol project. This project is designed to generate an additional 800 jobs during construction and 100 operational jobs. Stage 1 of the Green Line LRT project, valued at $5.5 billion, is set to begin this year. This project was approved by Calgary City Council in 2020. The Government of Alberta has committed $1.53 billion towards the Green Line project.

In response to tackling the current shortage of affordable housing, several residential investment projects are already under construction or set to begin soon. A total of $2.3 billion in residential investment projects are already under construction or set to start, representing close to 16 per cent of all major capital projects underway or set to begin. Approximately $550 million in residential construction projects are set to start in 2024, which is expected to provide some relief to the current affordable housing issues the city is facing. Most of these projects are expected to be completed between this year and the next. Some of the major residential construction projects set to begin this year include the proposed Beltline Block Tower valued at $110 million and the Bridgeland Place Redevelopment project will see the original 210-unit building, which was initially built in 1971, redeveloped into a new 222-unit affordable housing complex. These residential investment projects are expected to add an additional 10,000 housing units to the housing supply. This, in addition to the other programs being put in place by the municipal and provincial government, will support the current housing issue.

Overall, investments within the CER are expected to increase slightly this year, driven by the construction, real estate, and manufacturing industries. This improvement is expected to support the local economy, countering some of the macroeconomic headwinds.

Non-Residential Construction Price Inflation – Impact on City Costs

Overall, we're calling for another year of above CPI growth in construction prices with the remainder of our outlook timeline seeing construction cost increases that are slightly lower than anticipated gains in the CPI.

Over the past 5 years, some materials costs have faced dramatic fluctuations, particularly wood, steel, and aluminum. In 2022, this culminated in non-residential building inflation of just over 9.0 per cent. 2023 construction inflation came in at 4.1 per cent as some material prices fell from peak levels in 2022. In 2024, we anticipate some continued pull-back in those materials prices, however back-pressure has built on other cost components, particularly labour costs. Beyond 2024, we anticipate much less volatility in non-residential building prices.

Major Infrastructure Investments Underway

Green Line LRT, Stage 1
$5,500M

Calgary Events Centre
$1,220M

Future Energy Park Renewable Natural Gas and Ethanol Project
$1,200M

Calgary Arts Commons Transformation Project
$450M

University of Calgary: Life Sciences Research Centre
$190M

Bridgeland Riverside Continuing Care Centre
$130.5M

Top Private Investments Underway

East Village Block Q Mixed Use Towers
$250M

ENMAX Substation No. 1
$200M

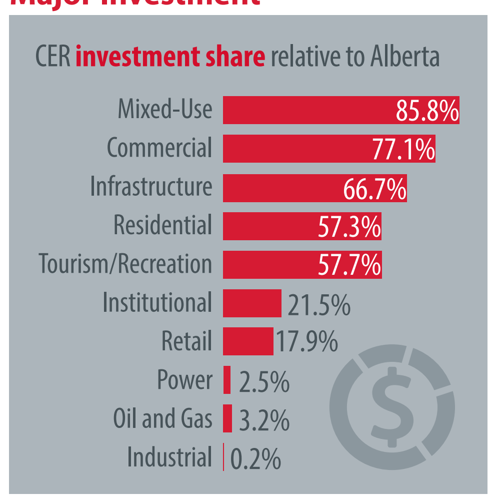
Glenbow Museum Renovations
$120M

Beltline Block Tower
$110M

The Podium at Medicine Hill Apartments
$100M

Barron Building Residential Conversion
$100M

Major Investment



Residential Activity – Building Investment and Expansion of the Residential Tax Base

Housing starts

Despite a backdrop of higher borrowing costs and a historical maximum number of housing starts in 2023, the number of housing starts in 2024 is expected to exceed peak levels. The housing market in Calgary is expected to remain strong as net migration, a principal component of population growth, remains significantly above the 10-year historical average of 16,000 persons per year. In 2023, the total number of housing starts in the city of Calgary saw its largest starts since 1972 when we began tracking this data, with over 16,700 starts, above the 14,800 experienced in 2022. We expect housing starts to reach about 17,600 in 2024 (above the 10-year historical average of 11,000 housing starts per year). Housing starts will be aided by expectations of the Bank of Canada relaxing monetary tightness in the second half of the year, and the housing strategies of various levels of government to address housing supply and affordability.

Total starts in the first two months of 2024, was a historical high, with over 2,800 total housing starts, 680 more units than in 2023 same period. The annual total housing starts are expected to trend downwards over the forecast horizon, 2025-2029 as migration tapers.

Building construction investment intentions

The building construction values for permits shared with The City of Calgary by builders provide a line of sight into the expected level of building construction investment. In 2023, total building permits reached $6.0 billion, up from $5.7 billion observed in 2022. Residential investment made up approximately $4.5 billion or 74 per cent of the building construction investment intentions in 2023. The share of building construction investment intentions for residential construction has shifted over the last two years above the 10-year historical average of 63 per cent.

The number of units intended for construction over the first two months of 2024 for the city of Calgary is historic with over 2,700 housing units slated for construction, 700 housing units more than were permitted in the same period in 2023. Residential construction investment is expected to maintain an above-average share of total construction investment in 2024 and taper off during the forecast horizon of 2025-2029.

The residential building construction investment is expected to reach $4.9 billion in 2024, approximately 76 per cent of total building construction intentions.

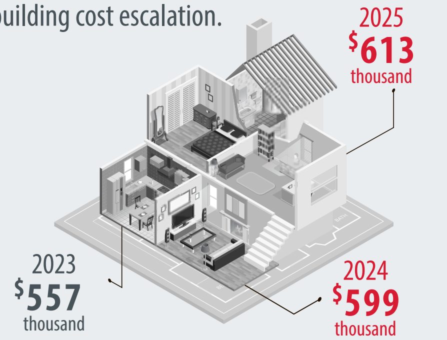
Average resale house prices

Higher borrowing costs due to the Bank of Canada's efforts to tackle inflation in 2023 contributed to an all-structure-house price growth deceleration in 2023, though the impact was uneven across housing structure types. The average house price across all-structure types was $539,313, an annual appreciation of 4.3 per cent in 2023 compared to 4.9 per cent in 2022. Despite the single digit average resale house price deceleration in appreciation of all-structure types, row housing structure experienced an annual 14.1 per cent appreciation in 2023 compared to 9.6 per cent in 2022, while apartment structure saw an annual appreciation of 8.1 per cent, up from 6.2 per cent experienced in 2022. The house price appreciation and acceleration experienced amongst these two categories of housing structure types was caused by a change in housing preferences driven primarily by affordability. Single-family resale house price averaged $719,811 in 2023, an annual appreciation of 9.8 per cent compared to 12.1 per cent annual appreciation in 2022, principally, slowed by higher borrowings.

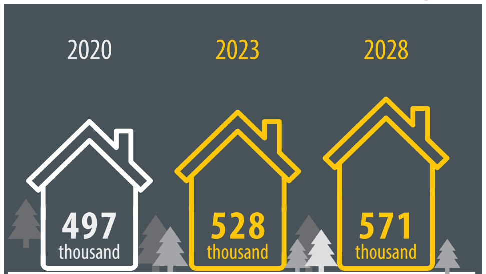
The expected increase in stock of housing supply (especially multi-family housing structures) should aide in the deceleration of average resale of house price appreciation in 2024, all else equal.

Benchmark House Price

The benchmark house price will experience an increase in 2024, backed by strong population growth and residential building cost escalation.



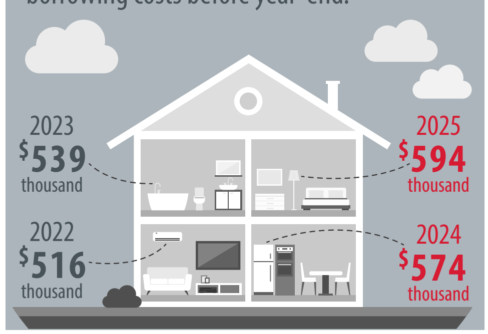
Occupied Residential Dwellings



Significant additions to the more than **half a million occupied residential dwellings** in Calgary should increase the demand for municipal services through 2028.

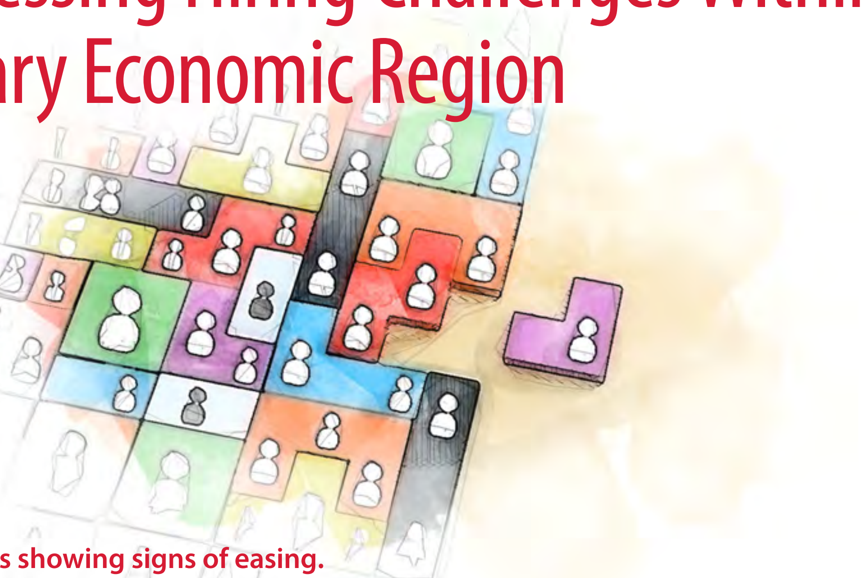
Average Residential MLS® Price

Average resale house price will rise in 2024, supported by firm population increase and some expectations of lower borrowing costs before year-end.



Textbox 1

Addressing Hiring Challenges Within the Calgary Economic Region

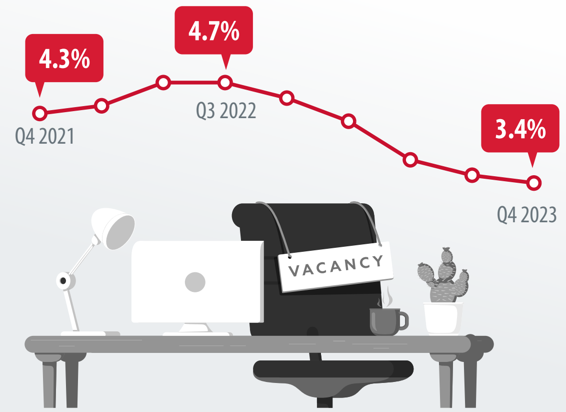


Calgary's labour market is showing signs of easing.

Calgary's labour market has shown signs of tightening since 2021, as post-pandemic demand for goods and services led to a rise in demand for workers, creating labour scarcity. Job vacancies saw a significant spike, reaching a record high in 2022. The unemployment rate also continuously declined during this period as hiring picked up.

The sudden surge in demand and rising vacancies led the Government of Canada to embark on increasing immigration targets to boost labour supply. This, combined with tightening monetary policy, is starting to cool down the labour market. Recent evidence shows that the labour market is beginning to ease. The Calgary Economic Region job vacancy rate fell for the sixth consecutive month, recording a 3.4 per cent growth rate to the end of 2023. The current business climate and the reluctance of businesses to boost their payrolls are other contributing factors to the slowdown in job vacancy rates. A significant contributor to the easing of the labour market can be traced to the construction, accommodation and food services industries.

> **CER Job Vacancy rate fell for 5 consecutive quarters after the spike in Q3 2022, reflecting a slowdown in employment growth.**



Cumulative imbalance (shortages) for some critical occupations should ease through 2026 before re-emerging.

The number of job seekers is expected to exceed the number of job openings between 2023 and 2026 as net migration reaches record highs. This is expected to reduce the number of job vacancies accumulated since 2022, reducing cumulative imbalances (shortages) within the current budget cycle. Projected job seekers will mainly comprise international immigrants and young people entering the labour force.

The next budget cycle (2027-2030) will see a slightly different trend. The combination of economic expansion as interest rates fall and the need to replace workers due to retirement is expected to lead to a surge in job openings and a slowdown in job seekers. As a result, some cumulative imbalance (shortage) challenges are expected to persist in critical occupations within the next budget cycle.

Within the forecast period, shortages are expected within the construction, retail trade, education, and accommodation/food services industry, specifically:

- General and technical construction trades.
- Retail salespersons and non-technical wholesale trade sales and account representatives.
- University professors and post-secondary assistants.
- Elementary and secondary school teacher assistants.
- Cooks, butchers, bakers and food support occupations.

On the other hand, surpluses are expected within the following occupations:

- Auditors, accountants and investment professionals.
- Insurance, real estate and financial sales occupations.
- Retail and wholesale trade managers.
- Helpers and labourers (longshore workers and material handlers).
- Elementary school and kindergarten teachers.

Addressing future occupational hiring challenges within the Calgary Economic Region.

Policy Action 1: Immigration support and advocacy are essential in addressing some of the projected hiring challenges. However, it is vital to attract people with the skills where shortages abound. Ensure that immigration policies target people of the right age and skills to guarantee that higher immigration targets translate into reducing job vacancies and obtaining higher labour productivity and economic growth.

Policy Action 2: Support for easing regulation and licensing requirements in particular professions will effectively address shortages while reducing underemployment among foreign-trained workers. Measures to cut red tape and expedite the integration of foreign-trained professionals will go a long way to address some of the shortages cities across the province face.

Policy Action 3: Introducing mobility incentives can help attract surplus labour from other provinces to occupations experiencing shortages. Mobility policies that allow for effortless movement between provinces will help address some of the shortages faced in regulated occupations across cities in Alberta.

Policy Action 4: Increased municipal government advocacy for provincial government investment in education and training programs for occupations with acute shortages can help ease projected labour shortages. The province launched the Alberta is Calling Attraction Bonus program, which provides eligible workers who move to Alberta with a $5,000 refundable tax credit. This initiative is expected to start in April 2024 and budgeted $14 million during 2024-2027 to address the critical labour shortage in Alberta. In addition, the 2024 Alberta Budget includes funding increases valued at $102 million over the next three years for 3,200 apprenticeship classroom seats in high-demand occupations and curriculum updates. Other investments to expand driver training, healthcare, aviation and energy programs are also underway. Finally, the 2024 Budget allocated $62.4 million over the next three years to expand physician education and establish rural health training centres to address the shortages of health professionals in rural areas.

Policy Action 5: Increasing job market participation by underrepresented groups, especially encouraging youth and women's participation in the labour force, can help decrease the trends and address some occupational shortages. Creating more opportunities for women in skilled trades, investing in more affordable and flexible daycare, and better maternity leave benefits will help increase participation among women within the region, mitigating the decline in labour force participation.

For detailed information, refer to the Calgary Economic Region Labour Market Outlook (2024-2033) by The City of Calgary.

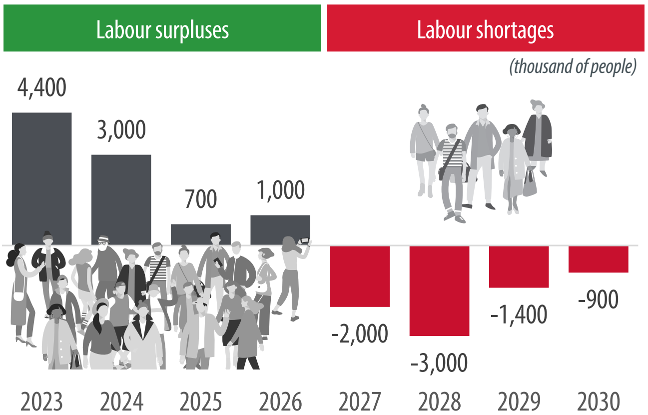
Occupations Expecting Labour Surpluses and Shortages in 2023-2028

Surpluses expected in:

- Auditors, accountants, and investment professionals
- Insurance, real estate, and financial sales occupations
- Retail and wholesale trade managers
- Helpers and labourers (warehouse workers and material handlers)
- Elementary and kindergarten school teachers

Shortages expected in:

- General and technical construction trades
- Retail salespersons and wholesale trade sales account representatives
- University professors and Post-Secondary Assistants
- Elementary and Secondary School Teacher Assistants
- Cooks, Butchers, Bakers, and Food Support Occupations



The CER labour market should experience labour surpluses during the 2023-2026 service plans and budget cycle driven by population and labour supply increases but expect shortages in the next cycle.

Consumer Price Inflation in the Calgary Census Metropolitan Area (CMA)

Living costs are accelerating significantly faster than the rest of Canada to start 2024.

Living costs in Alberta and Calgary have followed a different trend from other parts of Canada. The Calgary Census Metropolitan Area (CMA) recorded an inflation rate of 3.8 per cent in 2023, similar to the national average of 3.9 per cent. The fall in inflation in 2023 came primarily due to contractionary monetary policy, specifically the successive rate hikes, which brought interest rates to a significantly elevated level.

This year, however, we have seen a much different trend. The national average has fallen continuously from 3.4 per cent in December 2023 to 2.8 per cent as of February 2024. However, cities across Alberta have seen a continuous rise in inflationary pressure. For the Calgary CMA, inflation rose continuously from 3.9 per cent in December 2023 to 5.1 per cent in February 2024. This, combined with the slow wage growth in Calgary, is driving real wages down. For reference, Calgary's wages have been the slowest growing across cities in Canada despite having relatively high wages.

Overall, inflationary pressure appears to be on the rise in Calgary (and Alberta) while declining at the national level. A few factors are driving this trend:

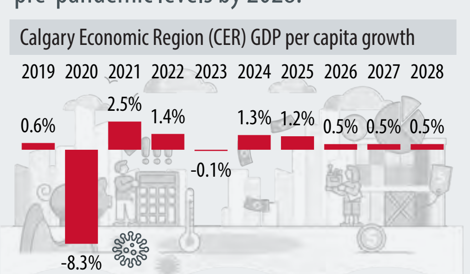
- **Shelter costs are on the rise as affordable housing supply remains low.** Alberta's population has increased since 2023, driving demand for shelter. Supply of housing has so far not been able to keep up with the surge in demand, driving shelter costs up. For February 2024, the cost of renting in Calgary rose by 15 per cent, the fifth consecutive month of double-digit growth.[1] This also ranked Calgary's rental costs as the fastest-growing in Canada.
- **Elevated energy costs.** Gasoline prices surged to start the year as the Government of Alberta reinstated the gasoline fuel tax, which was suspended for 2023 and partially reinstated at nine cents per litre in January 2024. The increase in the federal carbon tax to start the second quarter will also likely contribute to increased gasoline costs soon. Electricity prices across Alberta have also seen an increase as the end of Alberta's energy rebate program and higher energy prices have led to a rise in utility costs.
- **Shortage of construction workers and other inputs.** The shortage of construction workers has compounded inflationary risks further, slowing the completion of several housing projects and construction due to increased competition and price increases in the real estate market.

Overall, we expect inflation in the Calgary CMA to decelerate from 3.8 per cent in 2023 to 3.1 per cent in 2024, still above the Bank of Canada's 2.0 per cent inflation target. Calgary's living costs are expected to stay elevated as the impact of high population growth weighs on increased demand for food, shelter, and energy. This is expected to decelerate further to below 2 per cent from 2025 onward, as the monetary policy starts to loosen up and interest rates fall, providing an opportunity for business and economic expansion through increased investments. Municipal, provincial and federal efforts to increase affordable housing over the next few years are also expected to provide relief in the rental and ownership markets, helping slow down inflation.

1 Corporate Economics & Regulatory Affairs. (2024). Inflation Review February 2024. Calgary: The City of Calgary. https://www.calgary.ca/content/dam/www/cfod/finance/documents/corporate-economics/inflation-review/inflation-review-2024-02.pdf

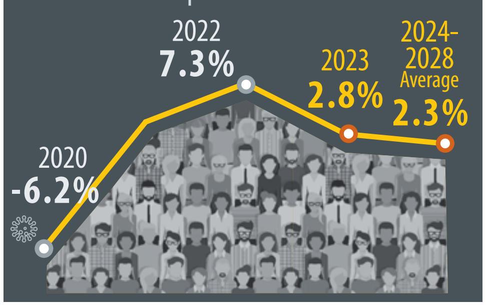
Living Standards

Despite the projected economic expansion, the **living standards** measured by real GDP per capita in Calgary expect **a mild decline in 2023** before gradually returning to its pre-pandemic levels by 2028.

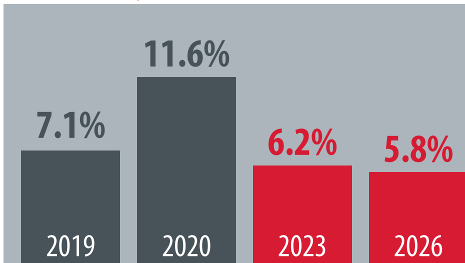


Annual Job Growth

After a COVID-19-driven job decline in 2020, **annual job growth rebounded significantly but is now decelerating**. After the 7.3 per cent high for 2022, it should decelerate to 2.8 per cent in 2023.



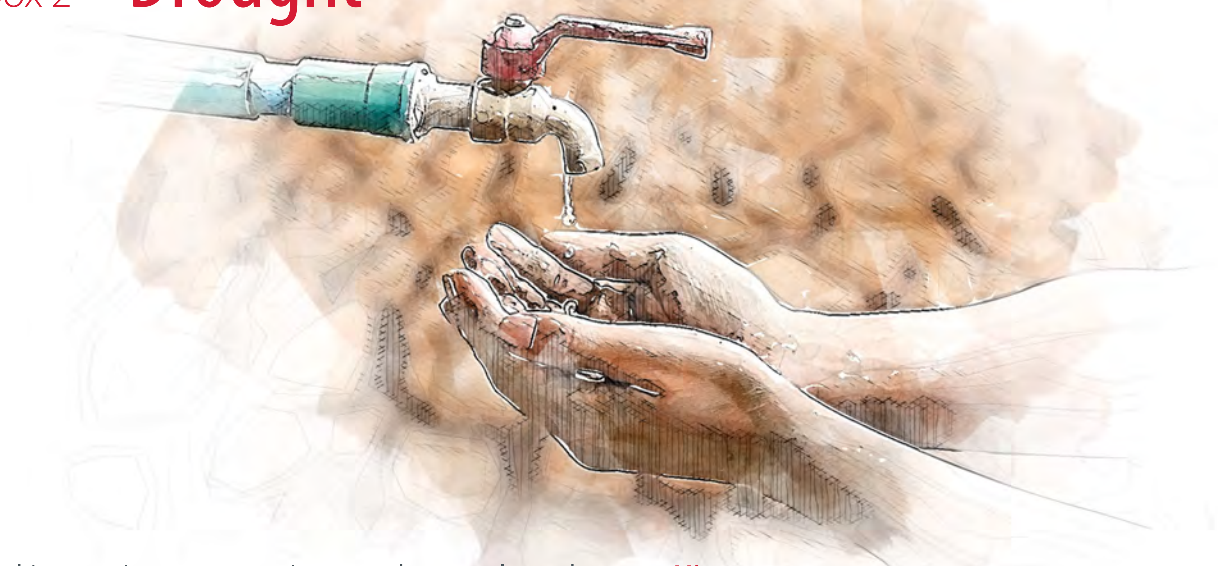
Unemployment Rate



The **unemployment rate** should deteriorate in 2023 before finally getting below 6.0 per cent later in the forecast horizon.

Textbox 2

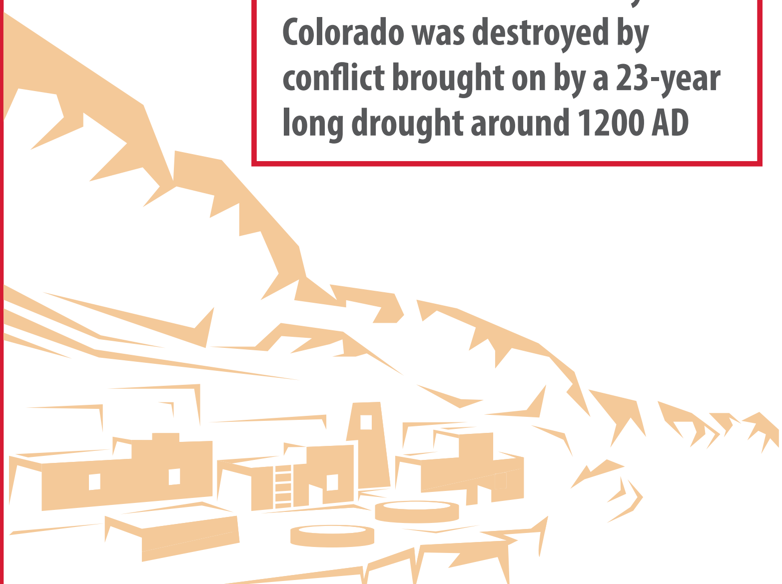
Drought



Few things can impact economies as much as a prolonged drought. Cities and nations have been abandoned due to drought. For example, Mesa Verde in modern day Colorado was destroyed by conflict brought on by a 23-year long drought around 1200 AD. Indeed, the highly advanced Maya civilization is thought to have been brought down by a prolonged drought, exasperated by deforestation to do agriculture and excessively harvest lumber, around 700 to 800 AD.

Some civilizations have survived water shortages by importing water. The city state of Rome built great aqueducts to move water great distances for irrigation and population needs, and has been done in many countries including Egypt, Libya, South Africa, India, Israel, Japan, Australia and others. Indeed, there are currently 2 proposals in China to move massive quantities of water great distances. Today southern Alberta boasts 11 irrigation districts which consist of 57 reservoirs and 8,000 km of pipe, making lands east and south of Calgary productive for agriculture and habitation.

> **Mesa Verde in modern day Colorado was destroyed by conflict brought on by a 23-year long drought around 1200 AD**



History:

Not much is known about the long-term history of North America's droughts. Most of what is known has been learned from examining tree rings and the history of the salinity of lake beds. It appears that from about 300 BC to 1200 AD, North America was relatively dry with frequent droughts lasting up to 200 years at a time. Around 1200 AD, with the onset of the Little Ice Age, North America became cooler and wetter but still occasionally experienced significant droughts. The drought of the 1930s, which impacted the U.S. Midwest much more than it impacted Alberta, peaked in 1934. That drought was the worst in recent history, estimated to be 30 per cent worse than the second-place North America wide drought which occurred in 1580. Local droughts are hard to measure; one town can get flooded while farms less than a kilometer away beg for rain all year. Additional factors like the time of year that precipitation falls, and the time snow melts make a significant difference. 2013 was an average precipitation year for the Calgary area but a historic flood hit in June. Declaring a 'drought year' really has more to do with the impact of precipitation (or lack thereof) on a region more so than how much actually falls over a year. Recent droughts in Alberta include 2002-2004 (net farm income was zero in Alberta in 2002), 2009 (central Alberta), 2010 (northern Alberta), 2015, 2021 (the worst in Alberta since 1934) and 2023 to present.

Impact of significant droughts on Alberta:

Alberta saw droughts in 1910, 1914, and the period 1917-1926 was considered quite bad. This led up to the "dirty thirties" when there was a North America wide drought from 1931 to 1939, which peaked in 1934. Exasperating the economic hardship of the predominantly agrarian Alberta economy of the day, the U.S. stock market crashed in 1929, for unrelated reasons. In short, in Alberta there was no water, no food and no one lending money to import any at the same time. The grit needed to survive such times was permanently ingrained into Alberta's culture; strong, independent, and self-reliant, but reality is that culture was borne out of being largely forsaken during drought years.

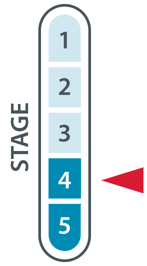
Politically, drought brought radical upheaval in Alberta. The United Farmers of Alberta (UFA) party won the 1921, 1926, and 1930 Alberta provincial elections. In 1929, repeated bad crops due to drought and the stock market crash stopped banks from lending to Alberta farmers. Bank foreclosures on farms increased dramatically in 1929. The political fallout from those foreclosures undid the UFA party. William Aberhart's Social Credit party gained popularity and swept aside the UFA in 1935.

William Aberhart was the first to try a universal basic income. Aberhart's proposal was to grant every Albertan $25 in what he termed "social dividends". At the time that would have bought the average Albertan about 4 months of groceries. The rationale behind the payments was that the depression was caused by people not having money to spend and by providing them with funds, it would stimulate the economy. This is the exact opposite of "trickle-down economics" that was tried by the Reagan administration in the U.S., which is now generally agreed to be a failed experiment. The Canadian federal government of 1934 thought that stimulating the economy by giving people money would destabilize the financial system and opposed the move so strongly that Aberhart was only able to issue some $1 and $5 "Prosperity Certificates" to Albertans who worked on public works projects, and few stores accepted them. Still, convinced that the problems of ordinary Albertans were the result of banks not lending money to regular citizens, the Social Credit party of Alberta created the Alberta Treasury Branch in 1938 with the express mandate to lend money to Albertans, especially when the big banks said no.

Economic Impact of Recent Droughts:

Today, a bad drought year in Alberta can impact the agriculture sector severely, shaving about 25 per cent of sector earnings, like in the bad drought year of 2021. That would come from reduced crop yields and higher costs to import feed for livestock. Provincially, that amounts to about a 0.5 per cent reduction in provincial GDP, or about $2 billion out of the $330 billion Alberta economy. Droughts do not tend to drive food prices up in Alberta. This is because there is so much profit margin between the farm and the retail levels that unless farm gate prices change by extreme amounts retail prices aren't noticeably impacted.

> **A severe drought year like 2021 can shave off approximately 25% of sector earnings, equating to about $2 billion out of Alberta's $330 billion economy.**



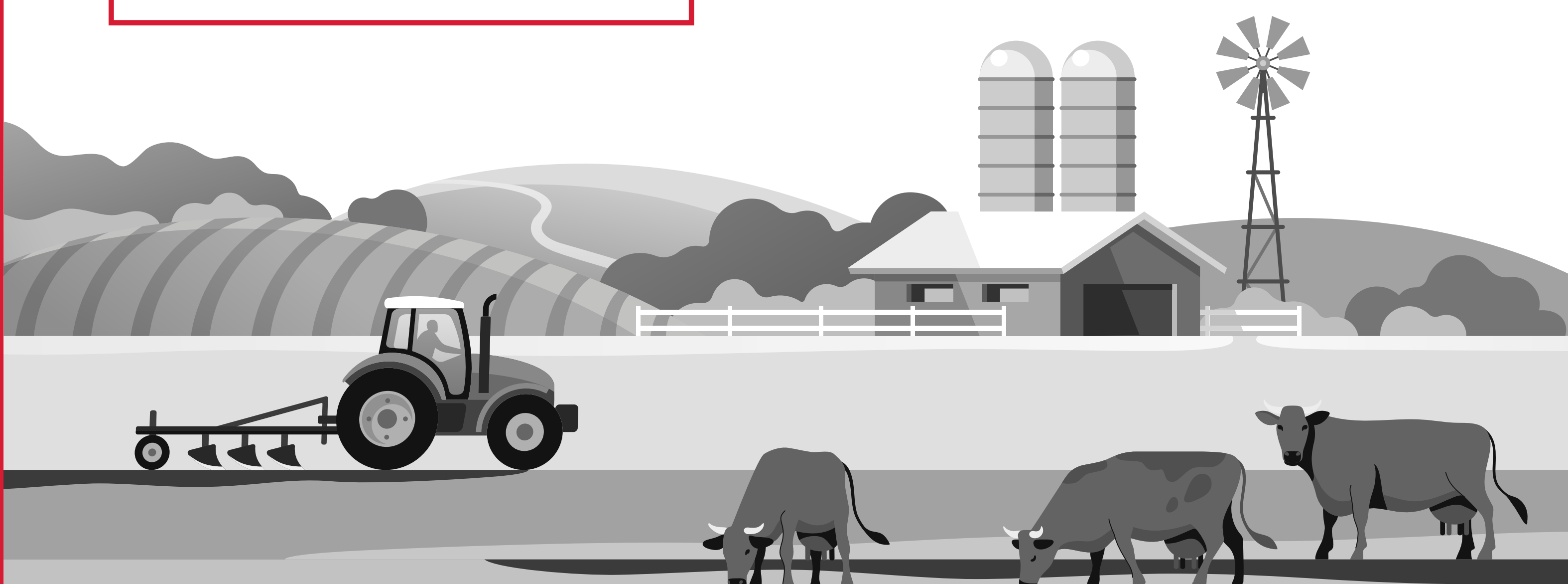
> **On average today, Alberta water levels are down with Alberta water management currently at stage 4.**

Drought Outlook

Droughts are extremely difficult to predict and can be highly local or continent wide. On average today, Alberta water levels are down with Alberta water management currently at stage 4 (there are 5 stages, stage 5 is where an emergency is declared due to a significant risk to human health and safety). Some reservoirs are low for this time of year, at less than half their normal levels, while some of the larger ones are at normal levels for this time of year. River flows are low. The Bow River, which Calgary relies upon, is at the fifth lowest flow level in the past 25 years. Snowpack is at about 2/3 of normal levels with more in the mountains than on the prairies, particularly in areas south and east of Calgary. Comparably in 2023, snowpacks were lower and melted early in the year, resulting in flooding in late May. Quick runoff led to low moisture levels early in the summer.

Summary:

Drought has the potential for significant economic impacts both to certain industries and to the citizens of Alberta. The necessity to construct large public works projects and possibly the total abandonment of an area are possible outcomes of severe drought.



Forecast

Commodity Prices - Local, Regional, & Provincial Economy Impact

Crude Oil Prices

In 2023, the crude oil market experienced significant volatility and an overall decline in prices, with an annual average of U.S.$77.6/bbl, influenced by numerous geopolitical and economic factors. Early in 2023, the G7 and European Union (EU) imposed a price cap on Russian crude oil and banned Russian oil seaborne shipments, leading to lower Russian production. In April 2023, OPEC+ unexpectedly cut oil production by 1.16 million barrels per day (b/d), pushing prices up as much as U.S.$4/bbl. Further cuts announced throughout the year by Saudi Arabia and Russia, further impacted volatility in supply. Additionally, geopolitical turmoil in the Middle East fueled volatilities.

Despite these efforts to sustain oil prices, West Texas Intermediate (WTI) prices settled lower due to supply outpacing global demand under tighter fiscal conditions. The Energy Information Administration (EIA) estimates that global supply edged up by 1.8 million b/d, reaching 101.8 million b/d, much higher than forecasted in January 2023, while demand had increased by 1.9 million b/d, reaching 101 million b/d. While OPEC countries continued to reduce production, non-OPEC member countries continued to increase their output, with the U.S. increasing its production by 1.6 million b/d or 8 per cent.

Going forward, it is predicted that the prices of WTI will be similar to 2023, around U.S.$77/bbl in 2024 and U.S.$75/bbl in 2025. The demand-supply dynamics will be more balanced than in 2023, as OPEC+ is expected to maintain its production at 35 million b/d, lower than the pre-pandemic five-year average level of 40.2 million b/d. However, potential internal discord within OPEC+, exemplified by Angola's exit over quota disputes in December of 2023, could prompt increased production as members seek to monetize reserves. With Angola's exit, OPEC+'s market share has dwindled from 34 per cent in 2010 to an expected 27 per cent in 2024. On the other hand, non-OPEC countries' production is expected to rise further but at a slower rate, except for new projects in countries such as Guyana, Brazil, Norway, and Canada, which are less sensitive to price fluctuations than shale production in the U.S. The growth in demand is forecasted to be around 1.4 million and 1.2 million b/d in 2024 and 2025, respectively, lower than the 10-year pre-pandemic average due to slower global economic growth and concerns over a slowing Chinese economy.

However, all the above and prices will be highly influenced by uncertainties such as sudden supply shocks and rising geopolitical tensions, such as those in the Red Sea. The Government of Alberta relies on WTI prices to be around U.S.$73/bbl for a balanced budget, and a $1 drop in price would reduce revenue by $630 million.

WCS was, on average, U.S.$64.9 /bbl in 2023 and is expected to be around U.S.$62/bbl in 2024 and U.S.$61/bbl in 2025. The imminent completion and start of the Trans Mountain Pipeline expansion (TMX) is expected to boost capacity by an extra 590,000 b/d and is expected to narrow down the WTI-WCS differential, which is currently hovering around U.S.$18/bbl. A narrower discount on WCS is expected to enhance the oil and gas sector's cash flow.

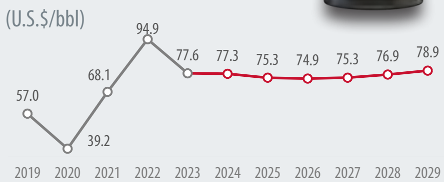
Natural Gas Prices

In 2023, the Alberta Energy Company (AECO) price, which is the benchmark price for Western Canadian natural gas, saw a significant drop to $2.50/GJ from 2022's high of $5.10/GJ. Starting at $4.90/GJ in January 2023, prices trended downwards to a July low of $2.20/GJ, the lowest level since 2020, with slight increases towards year-end. This was influenced by mild temperatures, leading to increased storage levels in the U.S. and Europe, which had stocked up the storage in preparation for a cold winter and uncertainties due to the situation in Ukraine. The storage levels in North America and the EU are much higher than the average in recent years.

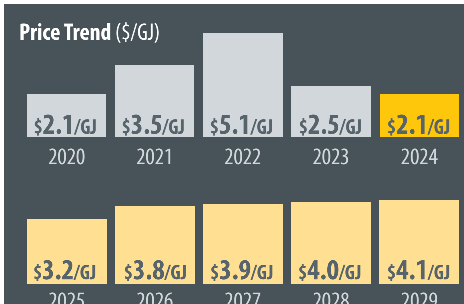
West Texas Intermediate (WTI)

Crude oil prices, including the **West Texas Intermediate (WTI) price, are expected to remain high for the forecasting period**, yet rising geopolitical tensions may cause volatility.

Price Trend (U.S.$/bbl)



Natural Gas (AECO-C)

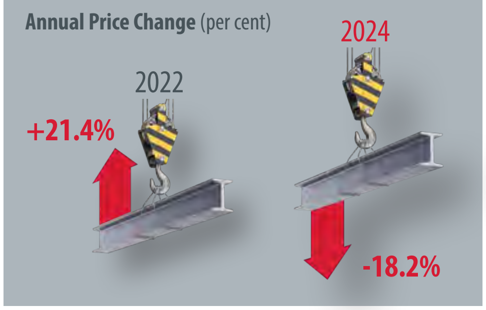


Natural gas prices are forecasted to remain relatively low in 2024 given ample storage level, but they should recover as the demand and supply balance improves.

Iron and Steel

Recent decreases in **ore prices** are filtering to finished products. Market shifts to carbon neutral steel imply price increases in the longer term.

Annual Price Change (per cent)



Amidst depressed prices, production was robust, especially in Permian Basin natural gas, which saw a 12 per cent increase in production. Overall, production in both the U.S. and Canada rose by 4 per cent and 2 per cent, respectively, in 2023. Gas rig activities in the U.S. were 5 per cent lower in 2023 compared to 2022, while Canadian activities increased by 10 per cent, according to Baker Hughes.

Given the ample inventory and the forecast of mild weather with historically high average global temperatures recorded in early 2024, it is expected that AECO prices will remain similar or slightly lower compared to 2023, with an average of $2.10/GJ for 2024. For the mid-term outlook, prices are anticipated to rebound as the oversupply moderates and the economy recovers, with prices forecasted to be $3.20/GJ in 2025 and $3.80/GJ in 2026. However, the International Energy Agency (IEA) anticipates a significant shift in Liquified Natural Gas (LNG) markets starting in 2025, with new projects poised to add 250 billion cubic metres per year of liquefaction capacity by 2030, equivalent to nearly half of the current global LNG supply. This influx, particularly concentrated between 2025 and 2027 and in the U.S. and Qatar, could temper the upward pressure on prices, counterbalancing recent concerns over supply security and price volatility, especially following Russia's supply cuts to Europe. In Alberta, government policies and incentives, such as the Alberta Petrochemicals Incentive Program, as well as major domestic projects such as the expansion of the Nova Gas Transmission Line system and the Coastal GasLink pipeline to Kitimat in British Columbia, are expected to stimulate the sector, fostering a more robust growth trajectory for AECO prices in the long term.

Construction Commodities

Key drivers to watch:

- Interest rates and their impact on employment and demand for construction
- Geopolitics; particularly the impact on international shipping costs
- Climate; drought and its impact on shipping costs
- Energy prices;
- Technology; possible long-term shift in technology which could dramatically impact markets particularly for diesel, chemicals, wood , but having significant impacts for the entire Canadian economy.

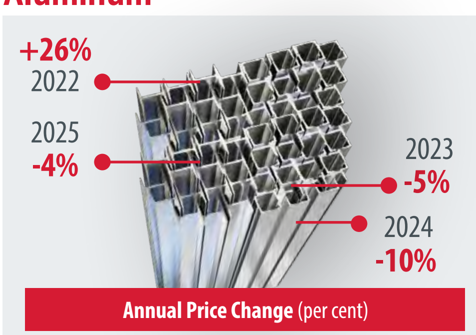
Iron and Steel

Global declines in ore prices are slowly filtering to finished steel prices in Calgary construction projects, and it looks like 2024 will see more of those raw material price declines migrating to Calgary. Beyond 2024 the outlook for local steel prices is decidedly upward. A significant risk to the forecast is the possibility of another Trump administration, which last time imposed a 25 per cent tariff on Canadian steel. Meanwhile the global shift away from petroleum-based fuels implies increased cost to manufacture steel over the longer horizon.

Aluminum

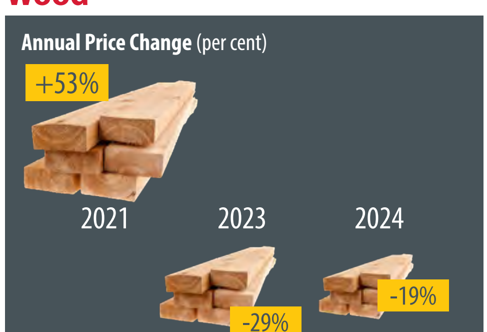
Aluminum markets face multiple challenges. Raw materials continue to command a premium while transportation through the Panama and Suez canals is adding extra delays and costs. The continued Russia/Ukraine war and international pressures against Russia are also supporting prices higher than the competitive market clearing price. The price declines we were expecting to see through 2023 were not as big as we had hoped. Our outlook

Aluminum



Aluminum prices slowly receeding. Bauxite prices are down but the ongoing war and transportation issues are keeping retail prices from falling further.

Wood



Wood prices stabilize. Todays prices appear stable but future prices depend on access to the U.S. and possible new tariffs.

Asphalt

Asphalt prices should increase, supported by increased oil prices. Carbon taxes significantly impact asphalt prices. If carbon taxes drop Asphalt prices will be lower than our forecast.

calls for continued decreases in prices when the Russia/Ukraine conflict ends. Thereafter we anticipate a more stable aluminum market although production costs will face challenges in a world increasingly pressured to decarbonize while the manufacture of aluminum requires high amounts of electricity.

Wood

Lumber prices appear to have stabilized in the U.S.$400 / thousand board feet range in North America, a dramatic drop from the highs of U.S.$1,400 recorded in March of 2022. Markets appear stable in the short run with demand for lumber facing offsetting pressures: high interest rates are dissuading some new home building while high immigration levels are increasing demand for housing. Overall, we anticipate fairly stable prices through 2024. In the intermediate term, competition among producers for access to the U.S. market will drive prices slightly lower throughout the remainder of our forecast, assuming a new U.S. presidency does not impose lumber tariffs, the way many presidencies have done before. On the horizon but well outside our forecast range, we look to see plastic prices falling and composite materials replacing much of today's lumber market.

Asphalt

Alberta produces large amounts of bitumen from its oilsands. About half of Alberta oilsands production is technically suitable for asphalt (which is the binder material mixed with gravel to make roads), but only about 10 per cent is used. The remaining bitumen is sent to upgraders and converted to a form of oil that can be refined to make petroleum fuels. Asphalt is seen as a by-product in Alberta and as such its price generally follows production costs and the price of oil. Our forecast of asphalt prices tracks our expectations on oil prices, interest rates and announced carbon taxes.

Operational Commodity Prices

Rubber: Globally, multiple issues affect rubber markets. Shipping costs have risen as shippers avoid both the Suez and Panama canals while weather issues have impacted natural rubber harvesting. On the downside, increased interest rates and fuel costs have resulted in much less summer driving than expected. People are keeping cars longer and not replacing tires until they are completely worn.

Next year, we anticipate the increase in material costs will overtake the effect of declining demand. Longer term, Saudi Arabia has indicated several times that it will not increase oil production beyond its current levels of 12 million bpd. Mostly oil, but also some coal and natural gas, is used to make artificial rubber, so the increased price of oil will pull the price of rubber upwards in the long term.

Diesel Oil

Diesel prices follow the price of oil, costs of refining and the impact of carbon taxes. Our model includes the most current projections for the price of oil in world markets including an uplift recognizing increased transportation costs due to conflicts which are making transportation through the Suez Canal difficult. We assume that Canada's existing carbon tax system will continue as currently scheduled. There is a downward risk to the forecast should Canada's carbon tax be reduced.

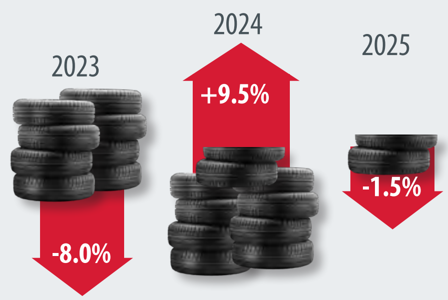
Vehicle Parts

Traditionally very stable, parts prices saw a significant uplift in 2022 which continued into 2023. Some escalation of material costs has influenced parts prices, but long inventory periods have delayed the pass-through to consumers. By 2026, we anticipate increased materials prices will have resulted in an uplift of parts prices of about 8 per cent above historical normal cost increases in this industry.

Rubber

Rubber prices respond to rising oil prices in 2024. Less summer driving due to high gas prices will lower rubber demand in the short term.

Annual Price Change (per cent)



Diesel Oil

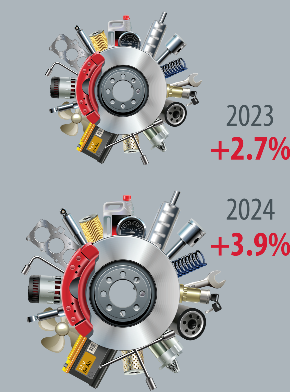
Alberta Diesel Pump Price (tax included)

Diesel prices should decline in 2024 but are experiencing a temporary uplift due to higher transportation costs in the Suez canal.

Vehicle Parts

Vehicle parts show some unusual price growth. Increased raw material costs are being passed to parts buyers, sometimes with an extra premium.

Annual Price Change (per cent)



Textbox 3

The City of Calgary and Local Access Fees

Utility wires and pipes use a lot of land and Local Access Fees (LAF) are used by municipalities across Canada and the United States so that it's easier for municipalities to collect property taxes and other charges.. In Alberta, these powers are granted through the *Municipal Government Act*. The LAF charged by The City of Calgary also covers municipal right-of-way access fees, which are required for natural gas and electric utilities to construct the necessary infrastructure on municipal lands to serve ratepayers. LAF are a significant source of revenue for The City and are budgeted to fund about 4 per cent of The City's operating budget from 2023 to 2026.

Existing "Total Bill" Methodology

Calgary's existing "total bill" LAF methodology has been in place since 1956. In the "total bill" approach, LAF calculations are based on both the distribution cost and the commodity cost. To measure the commodity cost for electricity, the Regulated Rate Option (RRO) is used. For natural gas, the Gas Cost Flow-through Rate (GCFR) is used.

Historically, the "total bill" approach has served The City well, striking a balance between revenue generation and affordability for ratepayers. In addition, with The City (as a corporation) being a large consumer of electricity and natural gas, the "total bill" approach could be seen as a natural hedge, in that the RRO and GCFR components would adjust The City's LAF revenue in accordance with its utility costs (i.e., higher LAF revenue when its utility costs are higher, and lower LAF revenue when utility costs are lower).

> **Local Access Fees (LAF) are utilized by municipalities across Canada and the United States to charge utilities a fee in lieu of paying property taxes.**

Residential RRO rate (cents per kWh) - July 2006 to March 2024

Rationale for Changing the LAF Methodology

Since 2021, there has been tremendous volatility with RRO prices. RRO prices have also set record highs, peaking at 33.86 cents per kWh in 2023 August. In contrast, RRO prices averaged 6.36 cents per kWh in 2020.

There has also been a disconnect between the RRO and Alberta wholesale electricity prices. While the RRO has historically traded at a slight premium to the underlying wholesale (Alberta power pool) price, the amount and volatility of this RRO premium has increased substantially since 2021.

The tremendous increase in the RRO price has increased the LAF collected by The City but has been critiqued as a "windfall" by some observers. As can be seen below, local access fee revenue for Calgary has skyrocketed since 2021, more than doubling from 2020 to 2023. LAF revenue from ENMAX has been particularly potent since 2020, largely due to the observed strength in the RRO.[2]

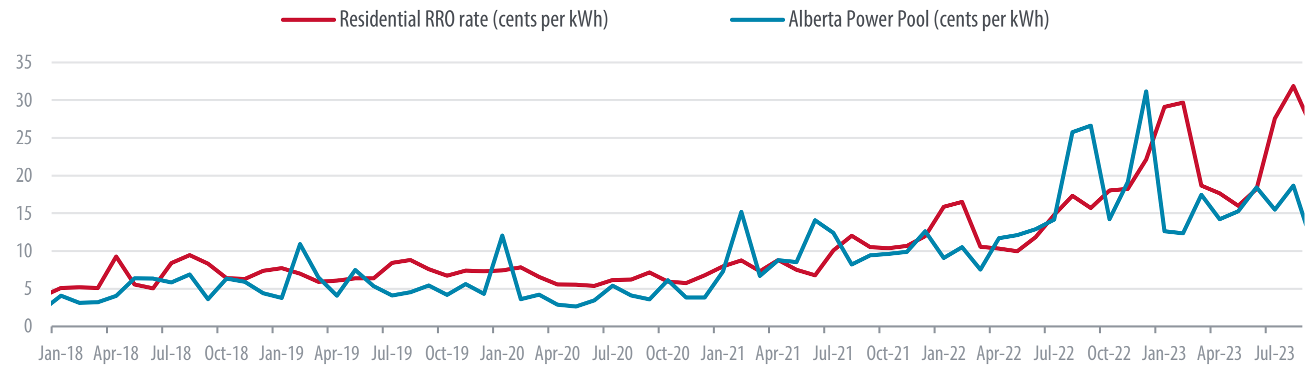
Simultaneously, affordability concerns for Calgarians have been prominent, with the highest levels of inflation observed in Canada in 40 years. Although other components, such as delivery charges, which are not within The City's purview, make up the majority of a typical utility bill, the LAF is designed to amount to 11.11 per cent of a typical utility bill[3], and is a component of utility bills that is directly adjustable by The City.

What Happens Next – "Quantity Only" Methodology

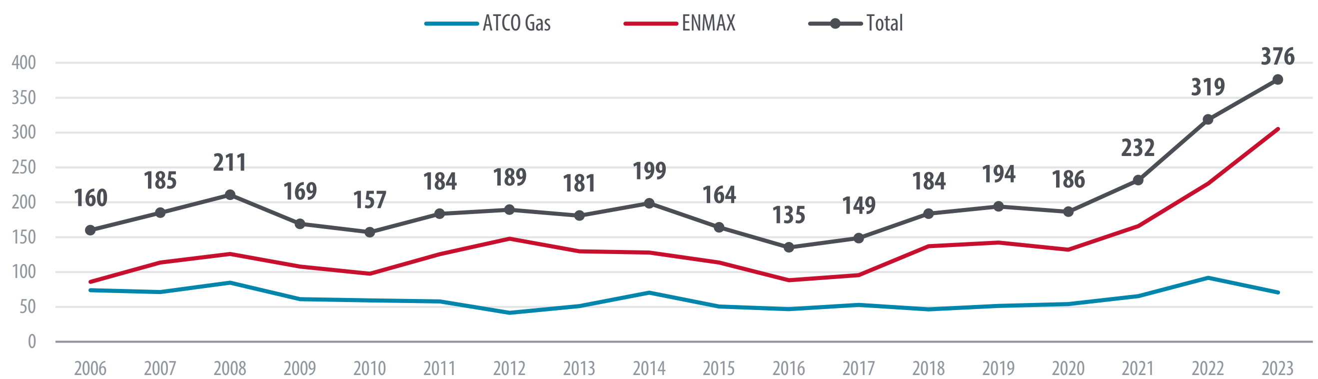
On March 18, 2024, Council directed City Administration to design and implement a revised LAF methodology that aligns with a "quantity only" model. As the name implies, a quantity only method ties the LAF revenue to the quantity of energy consumed and does not include a measure of the underlying commodity price (such as the RRO and/or GCFR). As such, LAF revenue under quantity only is unaffected by fluctuations in the RRO or GCFR and is therefore more stable and predictable for both The City and Calgary ratepayers. This was a culmination of multiple discussions between Council and Administration over the past several years over the LAF and how this affects the affordability of Calgarians.

On April 22, 2024, the Government of Alberta introduced the *Utilities Affordability Statutes Amendment Act, 2024*. If passed, the province is pledging that this will prohibit the use of variable rates when calculating municipalities' local access fees. The City hopes to incorporate design principles in the quantity only LAF methodology that results in more stable/predictable revenue while supporting the affordability concerns of Calgarians and businesses.

Residential RRO rate versus Wholesale Alberta Pool Price



City of Calgary Annual Local Access Fee Revenue ($millions) - 2006 to 2023



2 Textbox 4 ("Record High Alberta Electricity Prices and the Impact on Your Utility Bill") of the Calgary and Region Economic Outlook 2023-2028: Fall 2023 explores some of the reasons behind the record high RRO and Alberta electricity prices from mid-2021 to late 2023.

3 See the pie chart on https://www.calgary.ca/our-finances/facts/energy-costs.html

Textbox 4

Alberta's Inflation: What's Driving It, and What Makes It So Unique?

Between 2009 and 2019, Alberta's inflation rate averaged a modest 1.5 per cent annually. However, this trend shifted in the subsequent years, with rates of 1.1 per cent and 3.1 per cent in 2020 and 2021, respectively, culminating in a 40-year peak of 6.5 per cent. Although inflation had receded to 3.3 per cent in 2023, it remained above both the decade's average and the Bank of Canada's 2 per cent target. While Canada's overall inflation showed signs of deceleration, Alberta notably experienced an acceleration in the latter half of 2023. This textbox examines two following topics concerning Alberta's inflation:

1. The factors driving Alberta's inflation since 2020.
2. The causes of the divergence between Alberta's inflation from the Canadian average.

Food, Energy, and Shelter were the Main Drivers of Supply-Side Driven Inflation

The pandemic-induced global supply chain disruptions, compounded by geopolitical events such as Russia's invasion of Ukraine and significant droughts, have escalated energy and agricultural goods prices. Chen and Tombe (2023) show that energy, shelter and items that are sensitive to oil prices were the primary contributors to inflation, underscoring the supply-driven nature of the price increases. Another study has concluded that rising import prices accounted for about half of the inflation at its peak in the last three quarters of 2022, as Canada's supply chain became more reliant on the global supply chain (Wang, 2023; Statistics Canada, 2024). Businesses faced with pent-up consumer demand following COVID-19 restrictions, were easily able to pass these increased costs onto consumers (Macklem, 2024).

The chart on the next page visualizes the year-over-year inflation contributions by major components in Alberta from January 2020, according to Chen and Tombe (2023). Notably, the contributions from food and transportation have expanded, reflecting a significant uptick in gasoline and food commodity prices.

Contrary to widespread beliefs, factors such as elevated labour costs, corporate markups and carbon taxes that are often cited as potential inflation drivers, have been shown to have minimal impact on the overall inflation rate according to a series of studies (Bouras et al., 2023; Faryaar and Leung, 2023; Faryaar et al., 2023; Tombe and Winter, 2023; Bank of Canada, 2024).

> **The rental market has also become a significant driver of inflation in Alberta, particularly towards the latter half of 2023.**

Electricity Rebate Programs and Rental Costs Set Alberta on a Unique Inflationary Path

Since the beginning of 2023, Alberta has embarked on a unique inflationary trajectory, diverging from Canada's overall inflation rate by an average of 0.65 per cent — a notable increase from the 0.39 per cent difference observed from 2020 to 2022. This deviation peaked in February 2023 with Alberta's reading at 3.6 per cent and Canada's reading at 5.2 per cent, resulting in a 1.6 per cent gap. This was the largest discrepancy since 2014. Two key factors contribute to this divergence: the Electricity Rebate Program and the cost of rental accommodation.

The Electricity Rebate Program, initiated in July 2022, provided $25 rebates between July to December 2022, escalating to $75 in January and February 2023, and $25 for March and April 2023 to mitigate the impact of soaring utility costs. A comprehensive analysis of the factors driving this spike is provided in our Fall Economic Outlook 2023 (Corporate Economics, 2023). This program separated Alberta from the rest of Canada's inflationary path. For example, in February 2023 when a 1.6 per cent inflation gap was recorded, electricity costs in Alberta decreased by 48.6 per cent year-over-year (yoy), single-handedly reducing Alberta's overall inflation by 0.9 per cent — more than half of the 1.6 per cent gap, whereas the average contribution of electricity to overall inflation in other provinces was approximately 0.05 per cent.

During the policy's effective period, electricity prices, on average, showed a yoy decrease of 11.2 per cent, contributing about -0.2 per cent to inflation. While these policies have since expired, their effects persist, impacting Alberta's yoy inflation into the beginning of 2024. Given that prices from the second half of 2022 through the first half of 2023 were kept lower during the rebate period, electricity prices have risen significantly in the latter half of 2023, leading into the beginning of 2024. This increase has been further intensified by passing deferred loan payments for rebates onto consumers. Impacts that the price movement in the baseline year has on current yoy inflation is referred to as baseline effect.

From July 2023 to February 2024, the average yoy electricity price increase stood at 89.0 per cent, accounting for approximately 0.87 per cent of overall inflation. Since 2023, Alberta has experienced its highest yoy electricity inflation rates in Canada, illustrating the long-lasting impact of the Electricity Rebate Program.

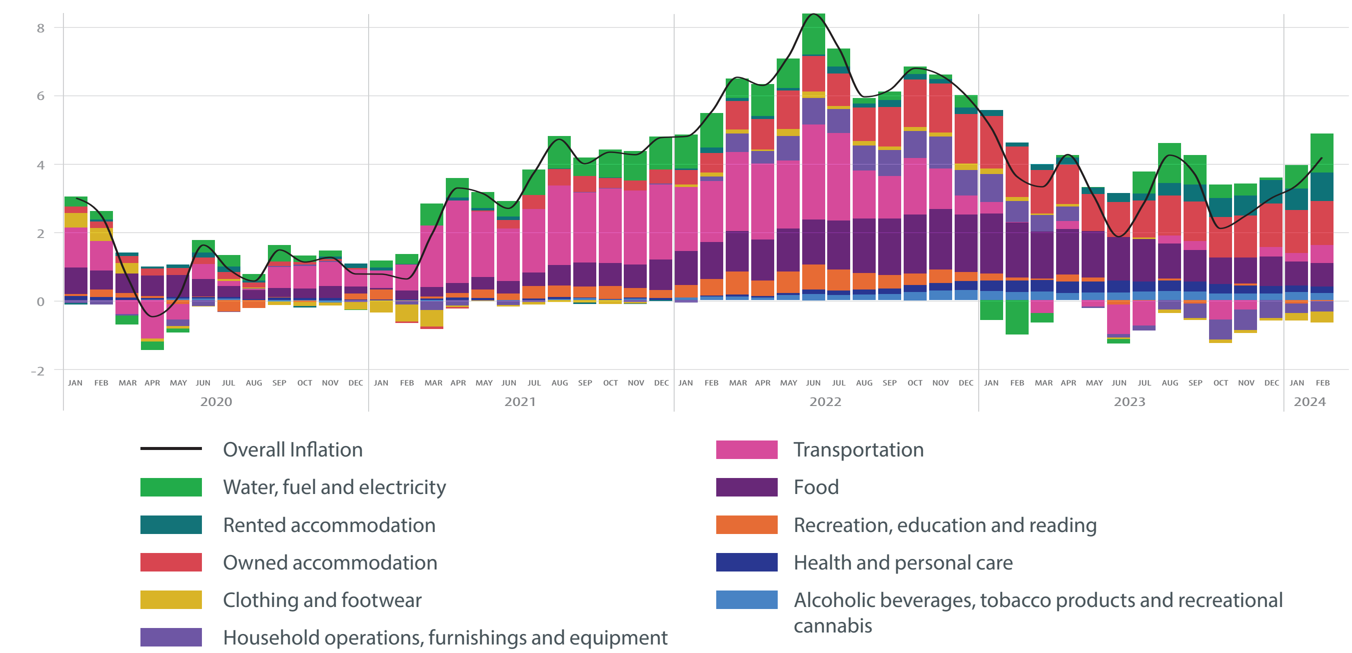
The rental cost has also become a significant driver of inflation in Alberta, particularly towards the latter half of 2023. From 2020 to 2022, the province witnessed an average rent increase of 1.3 per cent, contributing approximately 0.07 per cent to the inflation rate. However, in 2023, this figure surged to 5.7 per cent, contributing around 0.3 per cent to inflation, with the period from July to December, marking an even steeper increase of 8.3 per cent, accounting for a 0.5 per cent contribution. This contrasts with the rest of the provinces which averaged between 6.3 per cent and 0.4 per cent—or 5.7 per cent and 0.36 per cent if excluding Nova Scotia, which also had a high rent inflation. Both Edmonton and Calgary have seen double-digit yoy population growth in late 2023, with Calgary recording an 18.4 per cent increase, the highest on the record for Calgary and all other census metropolitan areas. Alberta has experienced its largest population growth in 40 years, primarily through international migration, coinciding with the most substantial rental demand inflation observed in the same timeframe. This surge in demand, coupled with limited housing supply, has propelled rental costs upward.

Conclusion:

The inflationary trends observed in Alberta from the onset of the pandemic through to 2023 have largely been driven by external supply-side pressures, including global geopolitical developments. However, starting in 2023, Alberta's own internal policies to tackle inflationary pressures have also significantly impacted the fluctuations in inflation.

While the housing crisis is not unique to Alberta, cities in Alberta, especially Calgary, have experienced historical surges in rental rates, underscoring the urgent need to address housing availability and affordability. Solving the housing crisis requires the involvement of all orders of government. These efforts are critical to tackling Alberta's unique challenges and securing Alberta's comparative advantage – relative affordability.

Contribution to Alberta's Inflation Rate



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Assumptions

Economic Conditions in Alberta

Alberta's Economic Growth will Continue to Lead in Canada, but its Growth is Expected to Moderate in 2024

In 2023, Alberta's GDP is estimated to have grown by about 2.1 per cent, surpassing both our forecast and the national GDP growth of 1.1 per cent. This growth occurred despite the headwinds from tight monetary policies, largely supported by record-high population growth, the highest growth rate in 40 years and high non-residential investment and energy prices. These factors boosted the economy, with crude oil production reaching approximately 1.4 billion bbl — an all-time high.

In 2024, amidst the continuation of contractionary monetary policies from 2023 and a slower global economic growth environment, Alberta's GDP growth is expected to be around 2.3 per cent. Similar to 2023, Alberta's relatively lower cost of living and economic opportunities, are forecasted to sustain one of the nation's fastest population growth rates, supporting consumer spending. However, this is likely to be offset by slower household spending as individuals renew their mortgages at much higher rates than those seen during the pre-pandemic periods. GDP growth is projected to increase to 2.7 per cent in 2025, before trending downward, with an average growth rate of 1.9 per cent from 2026 to 2029.

Employment growth is unlikely to keep pace with this rapid population increase, leading to a rise in the unemployment rate amid the economic slowdown. Government spending growth is likely to be restrained. Weather-related events, such as wildfires and droughts, could present significant risks to sectors like oil, agriculture, and tourism (see Textbox 2 for details).

On a positive note, residential investment is anticipated to be robust given strong population growth. Non-residential investments, particularly in energy, petrochemicals, aviation, and technology, are also expected to be robust. Inflation is expected to subside and the Bank of Canada is expected to cut interest rates in 2024, potentially boosting economic activities. Additionally, housing starts are expected to be high, driven by strong demand. Furthermore, the expected completion of the Trans Mountain Pipeline expansion could enhance production capacities and narrow the WTI-WCS differentials.

Alberta Labour Market is Slowing Down, but Remains Robust

In 2023, Alberta's population rose by about 202,000 (4.4 per cent), the highest increase on record. This was driven largely by international migration as well as significant migration from Ontario and British Columbia. This surge supported labour force growth, with employment increasing by 3.6 per cent in 2023 while the nominal wage increased by 4.1 per cent.

In 2024, Alberta is expected to continue attracting migrants, though at a moderated rate. While a historically large volume of migration has eased labour market tightness and lowered job vacancy levels, employment growth may lag behind as the economy softens, with projections suggesting a continuation of the downward trend observed in late 2023. Consequently, the unemployment rate is expected to rise in 2024. Wage growth is also expected to moderate. Between 2025 and 2029, unemployment is expected to gradually decrease as the imbalance between population growth and employment improves.

Despite a general softening in Alberta's labour market, sectors like construction may still experience hiring challenges (see Textbox 1 for more detailed analysis). The 2024-2027 Alberta budget announced in February includes initiatives aimed at attracting talent from other provinces to fill these labour market gaps, including the Alberta is Calling Attraction Bonus.

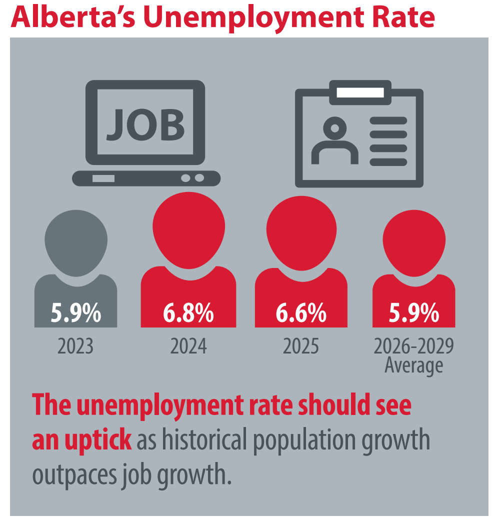
Alberta's Inflation should Edge Toward the 2 per cent Target, though Shelter Costs Pose Persistent Inflationary Pressures

In 2023, Alberta's annual average inflation rate was 3.3 per cent. This marks a significant drop from the 40-year peak of 6.4 per cent in 2022, as the Bank of Canada continued to raise interest rates three times by 75 basis points, reaching 5.00 per cent, the highest level

Alberta Economic Performance

Alberta's Employment Growth

Alberta's Unemployment Rate



since 2001. In 2023, lower inflation on energy and goods contributed to the decline, while food and shelter prices remained high. The Textbox 4 on page 26 offers an in-depth analysis of Alberta's recent inflation trends.

In 2024, Alberta's inflation is expected to cool further due to the economic slowdown. Food prices are expected to decelerate given improved global supply and fertilizer costs, though prolonged dry conditions in North America could impact certain items, such as beef, which rose about 8 per cent last year. Similar to last year, shelter costs, particularly rent prices, will stay persistently elevated due to strong population growth, slowing progress towards the Bank of Canada's target rate of 2 per cent.

Residential Investment Surges Amid Population Growth, while Business Investment Softens with the Exception of the Robust Energy Sector

In 2023, Alberta had approximately 36,000 housing starts, largely the same level as the 2022 figure and 10-year average level, despite higher interest rates and labour constraints in construction. This was primarily driven by multi-family dwellings, with investment rising 12 per cent compared to 2022. For 2024, a similar trend is expected, particularly for multi-family units, as a response to stronger demand for rental and more affordable housing options in the face of higher mortgage rates and higher average housing prices. Various government policies, such as the federal Housing Accelerator Fund and the provincial Stronger Foundation program, are set to encourage construction activity further.

In 2024, Alberta's overall capital and repair expenditure is expected to decline, according to Statistics Canada. Investment in energy sectors is, on the other hand, poised to stay strong and is expected to gain about $1.2 billion, thanks in part to the anticipated completion of projects such as Trans Mountain Pipeline expansion and Coastal GasLink. However, over the mid-term, the pace of growth in investment could slow due to the uncertainties surrounding federal emission reduction policies. The broader energy sector, especially in emerging low-emission technologies, will see significant projects, including Dow's Path2Zero, Air Products' new net-zero Hydrogen Energy Complex, Imperial Oil's biodiesel facility, and Heidelberg Materials' carbon capture initiative. Additionally, other sectors such as information technology and aviation are set to expand, highlighted by a $212 million federal contract for CF-18 maintenance and Fortinet's $30 million hub in Calgary. The 2024 provincial budget will also support growth with investments in medical care, infrastructure, and educational facilities.

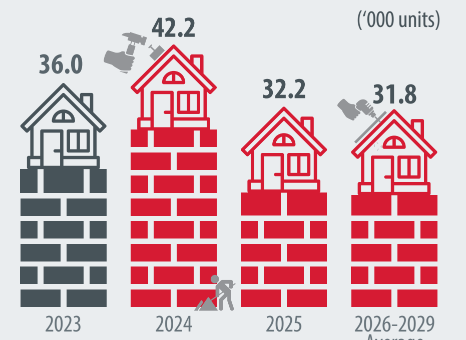
Alberta is Expected to be one of the Leading Provinces in Economic Growth

Alberta is poised to be one of the leaders in Canada's economic performance, driven by strong population growth and a positive outlook in the energy sector. The Atlantic provinces are expected to fare well, benefiting from high immigration levels. In contrast, BC and Ontario may lag due to slower economic conditions and consumer spending challenges stemming from high debt and interest rates, compounded by affordability issues, leading to net interprovincial outflows. Manitoba and Saskatchewan are projected to see modest growth, with dry conditions affecting agriculture, although this may be offset by strong business investment. Below is the ranking of consensus among private forecasters, comparing provinces based on their anticipated real GDP growth for 2024.

- Newfoundland and Labrador, 1.7%
- Alberta, 1.5%
- Saskatchewan, 1.1%
- Nova Scotia, 1.1%
- Manitoba, 0.9%
- Canada, 0.7%
- New Brunswick, 0.7%
- Ontario, 0.6%
- Quebec, 0.6%
- British Columbia, 0.5%

* The average of forecasts reported by the Royal Bank of Canada, Scotiabank, Desjardins, Stokes Economics, The Conference Board of Canada, National Bank of Canada, Toronto-Dominion Bank, Deloitte, and Bank of Montreal, was compiled from data surveyed on April 11, 2024.

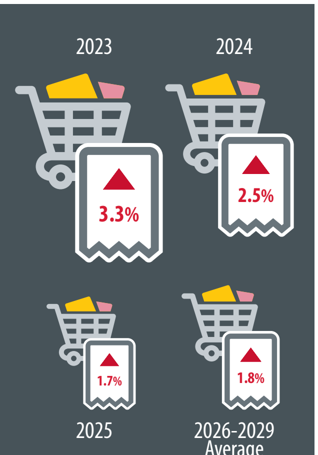
Alberta's Housing Starts



Alberta housing starts should remain elevated in 2024, supported by high population growth and housing policies from all orders of government.

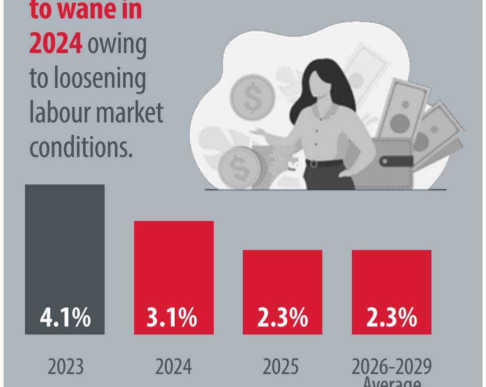
Alberta's Consumer Price Index

Alberta's inflation should edge towards the 2 per cent target rate, but persistent shelter cost inflation may slow the progress.



Alberta's Wage Growth

Wage growth in Alberta is projected to wane in 2024 owing to loosening labour market conditions.



Textbox 5

Personal Spending Cut Choices

Inflation, as measured by the Consumer Price Index (CPI), has been running high and personal budgets are being squeezed. Citizens are having to make decisions that they haven't in the recent past. As always, people have three choices: make more money, spend less, and shift spending between goods and services. Wage increases are on everyone's mind and some unions in Canada have requested large increases recently. This text box is dedicated to the other two options, helping Calgarians make difficult spending decisions.

We present an expenditure table here showing what typical Albertans spend their money on and note that the CPI includes most but not all of these things. Notably, the CPI measures after-tax expenditures whereas people clearly spend money on taxes too. For completeness we include taxes in our analysis here.

There are things that companies do to hide price increases from consumers. Some of those do not fool the CPI or the expenditure table, and some do. Shrinkflation (Bennett, 2022) is where a company changes their packaging to offer less product for the same price. Shrinkflation does not fool the CPI or the data in this table as these numbers are based on volume and weight of the product, not the size or printing on the packages. Skimpflation (Bennett, 2022) is where a company uses cheaper inputs to make their products. There are more chances of running into this the more processed the product is; likely no opportunity if you're buying cocoa nibs, possibly a lot of opportunity if you're buying candy bars. Food processing companies have been doing this sort of thing for a long time. Examples include replacing relatively expensive sugar with cheaper corn syrup and hiding the fact by using different names like "HFCS" or "liquid sugar". Indeed, the vast majority of fruit juices on supermarket shelves are apple juice with just enough of the type of juice printed on the label to provide colour. With canned goods, often the water content is increased to keep the weight constant but lower the manufacturing costs. Skimpflation can fool the CPI and the expenditure table presented.

Sometimes there are things governments do to increase taxes subtly and without it showing up in the CPI. One way that consumers budgets can shrink without it showing up in the CPI is through the process of "bracket creep" (Altig & Carlstrom, 1993). This is when the government does not adjust the tax brackets to account for wage increases and inflation in the economy. This can happen with income taxes and provincial education property taxes but municipalities in Alberta are not allowed to do this with municipal property taxes. As wages go up, more tax is collected, and the percentage of total income devoted to income taxes also increases. If wages and inflation go up by the same per cent and governments do not move the income tax brackets accordingly, then citizens will, by definition, be able to buy less after paying their taxes than they would if neither inflation nor wage increases happened.

> "
> **One way that consumers budgets can shrink without it showing up in the CPI is through the process of "bracket creep" (Altig & Carlstrom, 1993).**

Before making any decisions on what spending someone should adjust, it is always helpful to first have a clear picture of where the money goes. Personal budgets are the ideal starting point, but most people do not have detailed personal budgets. Statistics Canada produces information on average spending by the typical household and this may be a good place to begin looking at places to cut spending. The table below shows the typical spending for a typical household in Alberta in 2019. We selected that date as it is the most recent, non-pandemic data available. The table shows major areas of spending and the largest minor areas of spending.

The top 4 categories where Albertans spend 70 per cent of their income are:

1. 25 per cent to Household operations, household furnishings and equipment and shelter costs.
2. 20.8 per cent towards provincial and federal income taxes. Incidentally, municipal property taxes in Calgary chime in at about 1/10th the size of the typical income tax bill and consists of just over 2 per cent of Calgarians annual spending.
3. 12.4 per cent to transportation, most of which comes from owning and operating private vehicles.
4. 10.1 per cent towards food, of which the groceries/ restaurant split is 70/30.

The remainder of the list of includes, in order of magnitude: recreation (with tickets to events taking nearly 3 per cent of total spending), private insurance policies and pension contributions at almost 6 per cent, health taking nearly 3 per cent and the list rounds out with spending on gifts and miscellaneous spending.

By looking at a budget, or the table provided, it's possible to plan ways to reduce spending while having as little impact on quality of life as possible. This table can be a helpful guide, but it is only that. Everyone's circumstances will determine their personal best course of action. For example,quitting smoking won't save a full 4 per cent of income but that's based on population wide averages. It is quite likely that if you are one of the few that still smoke – quitting will likely save you more than 4 per cent of your personal income. Every individual has their own personal preferences so everyone will make different choices. Examples of how to reduce total spending by 4 per cent include:

- Using an insurance broker to find better insurance rates and reviewing what insurance is needed
- Foregoing vehicle ownership.
- Eating out less and going to fewer recreational events.
- Saving less and giving away less money .
- Changing to a less expensive dwelling and increasing spending on recreation.

The expenditure table below outlines what a typical Albertan spends their money on. Please note that the CPI includes most but not all of these things. CPI also measures after-tax expenditures whereas people clearly spend money on taxes too. For completeness, we include taxes in our analysis here.

Table: 11-10-0222-01 (formerly CANSIM 203-0021) Household spending, Canada, regions and provinces

Household expenditures, summary-level categories	**2019**				**% of Total**
Total expenditure	**112,317**	Subtotal			
Food expenditures		**11,322**			**10.1%**
Food purchased from stores			7,988		**7.1%**
Bakery products				686	**0.6%**
Cereal grains and cereal products				480	**0.4%**
Fruit, fruit preparations and nuts				861	**0.8%**
Vegetables and vegetable preparations				1,118	**1.0%**
Dairy products and eggs				1,135	**1.0%**
Meat				1,562	**1.4%**
Fish and seafood				210	**0.2%**
Non-alcoholic beverages and other food products				1,936	**1.7%**
Food purchased from restaurants			3,334		**3.0%**
Shelter		**22,591**			**20.1%**
Principal accommodation			20,569		**18.3%**
*Municipal Property Taxes (from Calgary Property Tax survey)				2,446	**2.2%**
*Provincial Property Taxes (from Calgary Property Tax survey)				1,402	**1.2%**
Rented living quarters				3,853	**3.4%**
Owned living quarters				13,365	**11.9%**
Water, fuel and electricity for principal accommodation				3,351	**3.0%**
Other accommodation			2,023		**1.8%**
Household operations		**6,521**			**5.8%**
Communications			3,168		**2.8%**
Pet expenses			963		**0.9%**
Child care			792		**0.7%**
Household furnishings and equipment		**2,574**			**2.3%**
Household furnishings			1,049		**0.9%**
Household equipment			1,354		**1.2%**
Household appliances			592		**0.5%**
Clothing and accessories		**3,592**			**3.2%**
Transportation		**15,632**			**13.9%**
Private transportation			13,936		**12.4%**
Public transportation			1,696		**1.5%**
Airplane				1,171	**1.0%**
Health care		**3,149**			**2.8%**
Direct health care costs to household			2,098		**1.9%**
Private health insurance plan premiums			1,052		**0.9%**
Personal care		**1,632**			**1.5%**
Personal care services			777		**0.7%**
Recreation		**6,247**			**5.6%**
Recreational equipment and related services			1,213		**1.1%**
Home entertainment equipment and services			235		**0.2%**
Recreational services			3,410		**3.0%**
Recreational vehicles and associated services			1,389		**1.2%**
Education		**1,715**			**1.5%**
Reading materials and other printed matter		**212**			**0.2%**
Tobacco products, alcoholic beverages and cannabis for non-medical use		**2,112**			**1.9%**
Games of chance		**167**			**0.1%**
Miscellaneous expenditures		**2,383**			**2.1%**
Financial services			1,089		**1.0%**
Income taxes		**23,379**			**20.8%**
Personal insurance payments and pension contributions		**6,039**			**5.4%**
Gifts of money, support payments and charitable contributions		**3,050**			**2.7%**

**Not included in Statistics Canada data, added here for completeness*

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Statistics Canada. Table 11-10-0222-01 Household spending, Canada, regions and provinces. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110022201

Assumptions

Economic Conditions in Canada

Growth in Canada Lagging behind the U.S.

After a strong start in Q1 2023, economic growth in Canada has stalled since the middle of the year. The estimated annual growth was 1.1 per cent for 2023, down from 3.6 per cent in 2022. The growth in household consumption, government spending and business exports was partially offset by declines in housing investments and business capital formations. The sharp overnight interest rate hikes by the Bank of Canada between February 2022 and July 2023 pushed up borrowing costs significantly, causing households and businesses to be more cautious in their spending and investment decisions.

From July 1, 2022, to June 30, 2023, Canada's total population grew by 1.2 million (or 3 per cent), three times the average annual growth of 0.36 million people between 2000 and 2021. The staggering population growth in 2023 was due to migration inflows: 60 per cent from the 698,000 non-permanent residents, including international students and temporary foreign workers, and 37 per cent from the 433,000 permanent immigrants. Only 2 per cent of growth was from the 28,000 natural increase (358,000 births minus 330,000 deaths). Out of the 1.2 million more people, 827,000 are working-age population aged 15 to 64 years old.

The large inflows of migration helped mitigate Canada's lack of population growth by natural increase, filling job vacancies created by retirees and new businesses. As job creation fell behind labour force growth, the unemployment rate in Canada increased from 5.0 per cent in January 2023 to 5.8 per cent in December 2023.

Real GDP growth in Canada is expected to slow further to 0.7 per cent in 2024, before picking up to 1.9 per cent in 2025 and averaging 2.2 per cent between 2026 and 2029. Recent population growth should provide sufficient labour supply to the economy and, as a result, support higher household consumption. Pent-up demand for housing should also drive investment in new housing units.

Upward Pressure on Inflation from Canada's Housing Shortage

Consumer price inflation eased in Canada in 2023. From 2022 to 2023, all-item CPI inflation declined from 6.9 per cent to 3.9 per cent. While all-item excluding shelter inflation decelerated from 6.7 per cent to 3.2 per cent, shelter inflation declined more slowly from 6.9 per cent to 5.6 per cent.

The persistently high shelter inflation reflected severe supply-demand imbalances in Canada's housing market. On the supply side, zoning restrictions, lengthy permit processes and a shortage of construction labour all constrained the growth in new housing stock in recent years. Total housing starts were 262,000 units in 2022 and 240,000 in 2023. On the demand side, large inflows of migration in 2022 and 2023 pushed up demand for both rented and owned accommodations. During the ten years before the COVID-19 pandemic (2010-2019), the average net non-permanent residents coming to Canada was 68,000 persons per year. However, the number jumped to 196,000 in 2022 and 698,000 in 2023. Over the same period, the annual average of net-in migration to Canada was 229,000, while the number increased to 459,000 in 2022 and 433,000 in 2023. As newcomers competed for a place to live, rented accommodation prices increased 6.3 per cent in 2023, up from a 4.7 per cent increase in 2022.

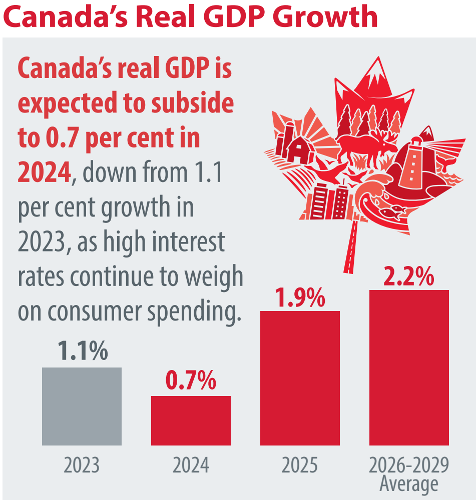
The upward pressure on Canada's inflation in the forecast period is expected to mainly come from the housing market. CPI inflation is forecasted to be 2.6 per cent in 2024 before reaching the Bank of Canada's target of around 2.0 per cent in 2025-2029.

Monetary Policy Expected to Ease

The recent interest rate hike cycle in Canada ended in July 2023, when the Bank of Canada (BoC) raised the overnight rate for the last time by 0.25 percentage points. Since then, the BoC has maintained the overnight rate at 5 per cent while watching the weakening economic growth amidst a heated housing market.

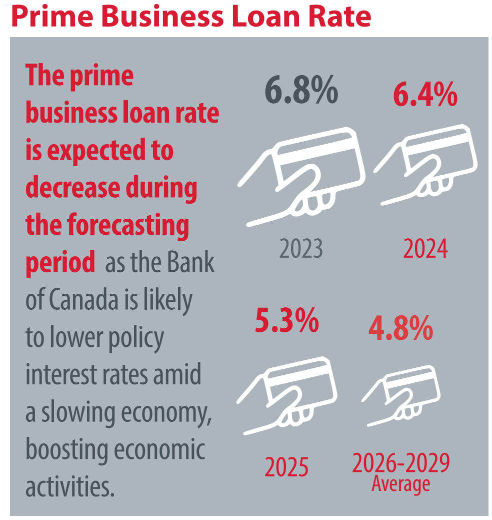
The interest rate cut cycle is expected to start in 2024. However, the timing and speed of rate cuts may largely depend on housing market activities. Cutting interest rates too soon and too quickly would result in a stronger-than-expected housing market, making it harder to re-anchor inflation expectations and bring inflation back to the target range. However, if rate cuts come too late and slow, high borrowing costs would hamper investment and sacrifice consumption. The consensus is that the Bank of Canada is expected to cut its overnight interest rate in mid-2024, gradually bringing it to 3.5 per cent in 2025.

Canada's Real GDP Growth



Canada/U.S. Exchange Rate

Prime Business Loan Rate



Assumptions

The United States Economy

Outstanding Economic Growth Driven by Higher Productivity

Economic activities in the U.S. accelerated in the second half of 2023. Annualized real GDP growth reached 4.8 per cent for Q3 and 3.2 per cent for Q4 2023, higher than the 2.0 to 2.6 per cent growth seen since Q3 2022. Real GDP growth was 2.5 per cent in 2023, compared with an increase of 1.9 per cent in 2022. The stronger-than-expected growth in 2023 was driven by consumer and government spending, exports, and businesses' buildup of inventories.

Productivity growth in the U.S. since the pandemic has been the engine of the country's outperformance in the past few years. Labour productivity (output per hour, index 2017 = 100) for all workers in the U.S. increased from the pre-pandemic peak of 105 in Q4 2019 to 112 in Q4 2023. Federal fiscal policies, such as the recent Infrastructure Investment and Jobs Act (IIJA), the CHIPS & Science Act, and the Inflation Reduction Act (IRA), provided incentives for private and public investment in technologies despite higher interest rates.

In addition, despite household savings levelling off from the pandemic peak, the unique 30-year mortgage structure in the U.S. helped homeowners keep spending on other goods and services. Between Q2 2020 and Q4 2021, a sharp decline in mortgage interest rates triggered a refinance boom in the U.S. Homeowners took advantage of ultra-low mortgages by extracting equity, reducing monthly payments or paying off mortgage balances quicker. More than a trillion dollars of new mortgages originated each quarter over the seven quarters. It was estimated that by mid-2023, about one-third of outstanding mortgage balances had super-low interest rates.

The U.S. economy is forecasted to grow at 2.0 per cent in 2024, decelerating to 1.5 per cent in 2025, before returning to an annual average growth of 1.9 per cent in 2026-2029.

Declining CPI inflation Amidst a Strong Labour Market

The U.S. labour market had another good year in 2023. Total employment increased to 156 million jobs, up from 153 million in 2022, surpassing the pre-pandemic peak of 151 million in 2019. The non-farm unemployment rate was 3.6 per cent in 2023, the same as 2022, down from 5.4 per cent in 2021 and 8.1 per cent in 2020.

However, amidst the strong labour market, CPI inflation in the U.S. declined from 8.0 per cent in 2022 to 4.1 per cent in 2023. The lower consumer price inflation was partially due to decisive monetary tightening policies from the Federal Reserve Bank of the U.S. (the Fed) and partially to the continuous increase in labour productivity.

CPI inflation in the U.S. is expected to be 2.7 per cent in 2024 and 2.3 per cent in 2025, averaging 2.2 per cent in 2026-2029.

Forwarding-looking Fed Expected to Cut Interest Rates

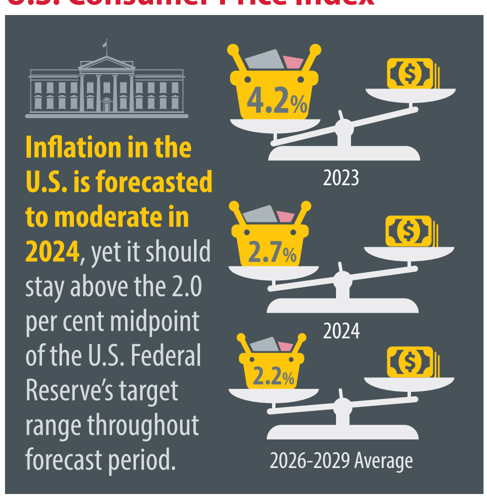
In August 2023, the Fed raised its interest rate the last time during the recent rate hike cycle. For the eight months prior to March 2024, the Funds' effective rate has been unchanged at 5.3 per cent. The quantitative tightening process also saw the Fed shrinking its total assets to $7.4 trillion in February 2024, down $1.3 trillion or 15 per cent from the peak of $8.9 trillion in April 2022.

The resilient labour market along with the above-target inflation rates observed in early 2024 suggests that the Fed will be cautious in deciding when to cut interest rates. However, a forward-looking Fed has signaled its intention to start cutting rates this year to avoid increasingly higher risks to the financial system due to monetary tightening.

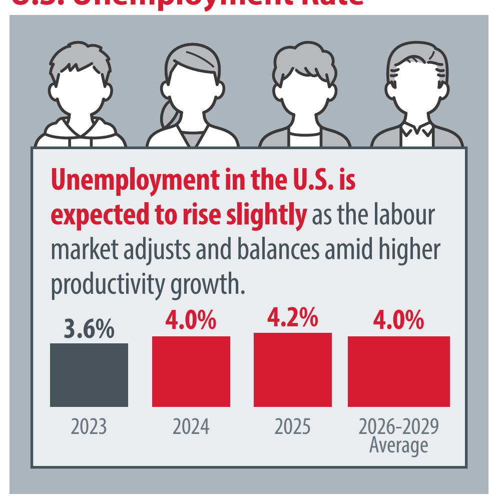
The U.S. Federal Open Market Committee has recently projected that the Fed Funds Rate should decline from 5.4 per cent in 2023 to 4.6 per cent in 2024, before reaching 3.6 per cent in 2025 and 2.9 per cent in 2026.

U.S. Real GDP Growth

U.S. Consumer Price Index



U.S. Unemployment Rate



Assumptions

The World Economy

Output-Growth Snag

In 2023, global real gross domestic product (GDP) growth is estimated to have slowed to 3.2 per cent from 3.5 per cent experienced in 2022. Despite a relatively strong tightening of monetary response by various economies to tame inflation, global GDP has shown some resiliency in growth. The expectation of a potentially soft landing for 2023 has materialized and global real GDP growth is expected to maintain a similar path in 2024.

The subsequent increase in business and household debt to tackle inflationary pressures on the demand side requires further surgical precision to accommodate gradual household recouperation from the accumulating debt burden. Also, essential to stabilizing the risk of increasing debt are the management of geopolitical tensions, the current war in Ukraine and Russia, the war between Israelis and the Palestinians, and management of climate. The escalation or lack of containment could result in further loss of lives, and supply chain disruptions which could inevitably reverse the potential of further relaxation of tightened monetary stance.

The resilience in global growth in 2023 was supported by the largest two economies, the U.S. within the advanced economies and China (the second largest) within the emerging and developing economies. China's real estate market challenges have tapered, boding well for consumer confidence in 2024. Protectionist attempts to regionalize supply chains to mitigate market disruptions continues to hold ground and may pose a downside risk to global growth. The outcome of the 2024 U.S. presidential election could also alter global risk factors, something to pay very close attention to.

Global real GDP within the forecast horizon is expected to remain below the 2000-2019 historical global real GDP average of 3.8 per cent.

Advanced economies are expected to see GDP increase from 1.6 per cent growth in 2023 to 1.7 per cent growth in 2024 and rise to 1.8 per cent in 2025 as monetary policy stance relaxes from attempts to rein in inflation. Emerging market and developing economies are expected grow by 4.2 per cent in both 2024 and 2025. Provided inflation continues towards its downward trajectory to target with no significant hiccups, and artificial intelligence (AI) drives productivity, GDP growth path is expected to remain robust.

Inflation's Deceleration in the Right Direction

Attempts to wrestle down global inflation in 2023 by the central banks have so far achieved the intended goals. Global inflation is estimated to have been 6.8 per cent in 2023 and is expected to be 5.9 per cent in 2024. Provided climate-related events remain subdued, and stronger emphasis on war resolutions and tempered geopolitical rhetoric, global inflation is expected to maintain a downward trajectory in 2025. Inflation is projected to decelerate to 4.5 per cent on the backdrop of relaxed monetary policy stances.

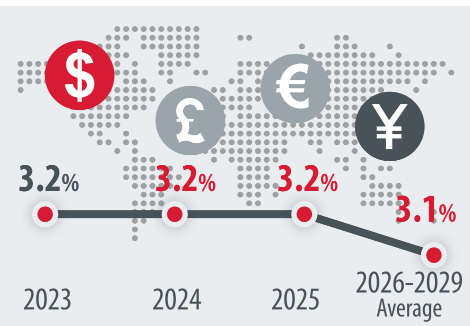
Inflation for advanced economies fell to 4.6 per cent in 2023 from a high of 7.3 per cent experienced in 2022, an aggressive drop orchestrated by a concerted effort of central banks to tackle an out-of-control inflationary environment. In the emerging and developing economies, inflation deceleration was not as aggressive, nonetheless, inflation decreased to 8.3 per cent from a high of 9.8 per cent in 2022. Inflation is expected to remain stable in 2024 at 8.3 per cent before continuing on a downward trajectory decelerating to 6.2 per cent by 2025.

Regionalizing and Internalizing Supply Chains should Slow Trade, however Lower Borrowing Costs may Mitigate Some of the Potential Trade Slowdown

The historical average of global trade growth between 2000-2019 was 4.9 per cent per year. The bounce back in global trade (after COVID-19) since 2022 has averaged 3.0 per cent per year. Multiple factors in 2023 contributed to the pull back in global trade which saw an estimated growth of 0.3 per cent, including weak global demand, shifts in spending patterns from internationally traded goods to domestic services, and increasing trade barriers.

However, the tools to combat high inflation experienced in 2022 and into 2023 have aided in the expected slowdown of investment and household demand in 2023. Though trade is expected to increase in 2024 to 3.0 per cent, it remains below the historical average growth as some reshoring and regionalizing of supply chain production efforts persist for some countries. Global trade growth is expected to average 3.3 per cent over the forecast horizon (2025-2029) as expected lower borrowing rates drive consumer and business confidence up and investment motives higher.

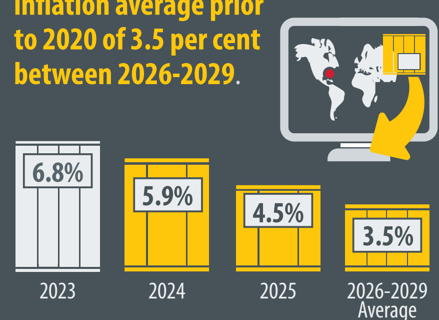
World Real GDP Growth



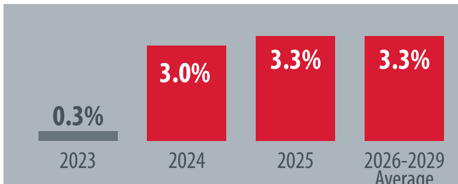
World real GDP continues to exhibit resiliency, growing at a stable pace, but lower than the 10-year GDP average of 3.7 per cent prior to 2020.

World Consumer Price Inflation

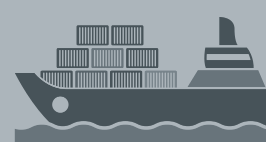
Inflation is expected to drop to 5.9 per cent and 4.5 per cent in 2024 and 2025 respectively and back to **the 10-year inflation average prior to 2020 of 3.5 per cent between 2026-2029**.



World Trade Volume Growth



Trade is expected to increase to 3.0 per cent in 2024 and 3.3 per cent in 2025 on the backdrop of expected relaxed monetary policies. **The 10-year trade average prior to 2020 was 4.6 per cent.**



Forecast Tables

Glossary

Calgary Economic Region Map

Forecast Tables

Table 1 - Selected Economic Indicators

Rest of the World, United States, Canada, Alberta, Calgary Economic Region (CER) & Calgary Census Metropolitan Area (CMA)

FORECAST COMPLETED: April 2024						FORECAST					
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ASSUMPTIONS											
World											
Real Gross Domestic Product Growth (%)[†]	2.8	-2.7	6.5	3.5	3.2	3.2	3.2	3.2	3.1	3.1	3.1
The United States											
Real Gross Domestic Product Growth (%)	2.3	-2.8	5.9	1.9	2.5	2.0	1.5	2.1	2.0	1.9	1.8
Canada											
Real Gross Domestic Product Growth (%)	2.0	-5.1	5.0	3.6	1.1	0.7	1.9	2.3	2.4	2.1	2.0
Prime Business Loan Rate (%)	4.0	2.7	2.4	4.2	6.8	6.4	5.3	5.0	4.7	4.7	4.6
Exchange Rate (U.S.$ for 1C$)	0.75	0.75	0.80	0.77	0.74	0.75	0.77	0.76	0.76	0.75	0.75
Alberta											
Real Gross Domestic Product Growth (%)	0.1	-7.8	4.7	5.3	2.1	2.3	2.7	2.2	1.9	1.9	1.7
Total Employment Growth (%)	1.2	-7.1	5.4	5.2	3.6	2.4	2.3	2.1	1.9	1.8	1.7
Unemployment Rate (%)	6.8	11.3	8.6	5.8	5.9	6.8	6.6	6.2	5.9	5.7	5.6
Housing Starts ('000 Units)[††]	27.3	24.0	31.9	36.5	36.0	42.2	32.2	32.9	31.5	31.0	31.8
Inflation Rate - CPI (%)	1.8	1.1	3.2	6.4	3.3	2.5	1.7	1.8	1.8	1.8	1.9
Crude Oil Price - WTI (U.S.$/bbl)*	57.0	39.2	68.1	94.9	77.6	77.3	75.3	74.9	75.3	76.9	78.9
Western Canadian Select - WCS (U.S.$/bbl)*	43.4	27.6	54.4	74.9	59.0	61.9	61.4	58.5	59.3	60.4	61.6
Alberta Natural Gas Price - AECO/NIT ($/GJ)	1.6	2.1	3.5	5.1	2.5	2.1	3.2	3.8	3.9	4.0	4.1
Industrial Product Price Index (%)	-0.1	-0.4	13.9	12.8	-1.8	-0.5	1.4	1.6	1.7	1.8	1.8
Raw Materials Price Index (%)	-2.5	-8.2	32.4	23.7	-8.1	-2.6	0.1	1.0	1.5	1.8	1.8
Alberta Average Wage Rate Increase for All Industries (%)**	0.8	-0.3	1.0	5.4	4.1	3.1	2.3	2.9	2.1	2.1	2.1
FORECAST											
Calgary Economic Region (CER)											
Real Gross Domestic Product Growth (%)[✧]	2.5	-6.6	3.3	5.1	2.9	2.3	3.3	2.3	2.3	2.3	2.3
Total Employment ('000 people)	891.1	835.6	870.1	933.9	957.7	982.5	1,008.2	1,029.2	1,050.6	1,072.8	1,095.0
Total Employment Growth (%)	3.3	-6.2	4.1	7.3	2.5	2.6	2.6	2.1	2.1	2.1	2.1
Unemployment Rate (%)	7.1	11.6	9.0	6.0	6.0	6.6	6.1	6.0	5.9	5.8	5.8
Calgary Census Metropolitan Area (CMA)											
Housing Starts ('000 units) [✧✧]	11.9	9.2	15.0	17.3	19.6	20.5	19.6	19.6	19.2	18.3	17.4
Inflation Rate - CPI (%)	1.4	1.1	3.2	7.2	3.8	3.1	1.7	1.9	1.9	1.9	2.0
Non-Residential Building Construction Inflation (%)	2.1	0.5	4.0	9.0	4.7	5.3	0.7	2.0	2.4	0.9	2.2

Numbers may not add up due to rounding.

Sources for historical data: [†] International Monetary Fund (IMF) [††] Statistics Canada * Bloomberg
** Alberta, Wages & Salaries Per Employee from Conference Board of Canada [✧] Corporate Economics [✧✧] Canada Mortgage and Housing Corporation (CMHC)

Table 2 - Selected Indicators for City of Calgary

City of Calgary

FORECAST COMPLETED: April 2024						FORECAST					
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
REAL ESTATE											
Residential Market											
Housing Starts ('000 units)*	10.6	7.9	12.7	14.8	16.7	17.6	16.7	16.7	16.3	15.6	14.8
Average Residential MLS® Sale Price Growth (%)**	-4.2	-0.1	7.6	4.9	4.3	6.5	3.5	3.6	1.7	1.3	1.7
Benchmark House Price Growth (%)**	-3.8	-0.9	12.8	12.4	5.2	7.6	2.4	3.2	1.2	0.7	1.1
Total Building Permits ($billions)	5.0	3.4	5.6	5.7	5.9	6.3	5.2	5.7	5.7	5.7	5.7

Numbers may not add up due to rounding.

Sources for historical data: * Canada Mortgage and Housing Corporation (CMHC) ** Calgary Real Estate Board

Table 3 - Selected Commodity Prices

City of Calgary

FORECAST COMPLETED: April 2024						FORECAST					
Unit: per cent	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
CONSTRUCTION COMMODITIES											
Iron and Steel Products	4.3	-0.9	27.6	21.4	-2.0	-18.2	-7.5	-2.1	3.3	2.5	3.5
Aluminum Products	-2.6	-6.2	29.6	26.3	-4.8	-10.2	-4.4	3.3	5.1	3.8	3.3
Wood	-3.0	24.3	52.7	-6.4	-29.3	-19.1	-5.1	-5.2	-1.7	-3.3	1.1
Asphalt*	6.3	-9.5	4.5	66.2	-11.6	11.1	4.4	6.0	3.7	0.4	8.2
OPERATIONAL COMMODITIES											
Rubber	6.7	0.5	15.2	-7.2	-8.0	9.5	-1.5	3.3	3.4	-1.3	4.5
Diesel Oil	-7.7	-15.4	25.7	42.0	-13.6	-1.3	-1.6	3.3	4.3	-2.9	4.3
Vehicle Parts	2.0	1.1	2.3	7.0	2.7	3.9	3.7	1.9	0.0	0.0	2.1

Numbers may not add up due to rounding.

* Based on Ontario Ministry of Transportation Asphalt Price Index

Glossary

Advanced Economies
The International Monetary Fund recognizes 41 developed countries and territories as advanced economies: Andorra, Australia, Austria, Belgium, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, (Republic of) Korea, Latvia, Lithuania, Luxembourg, Macao SAR, Malta, Netherlands, New Zealand, Norway, Portugal, Puerto Rico, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, United Kingdom and the United States.

AECO-C
Is the central natural gas spot market price for Alberta, measured in Canadian dollar per gigajoule. Joule is the international measure of energy. One gigajoule corresponds to one billion joules.

Apartment
Within the context of this report and Calgary's Civic Census, an apartment is a structure originally designed and built to contain at least three dwelling units on three or more levels. The dwelling units share outside entrances. Apartments include rental units and those that are owner-occupied.

Bank of Canada
The Bank of Canada is the central bank of Canada tasked to provide monetary and fiscal stability to the economy.

Business Fixed Investment
Business fixed investment represents the spending by businesses to increase production capacity. It is traditionally decomposed into equipment (such as computers and machines), structures (such as plants, shopping malls, or warehouses), and intellectual property (such as software and research and development).

Calgary Economic Region (CER)
Is an Alberta economic region that covers the city of Calgary and its surrounding twenty cities, towns, villages, and Indian reserves including: Beiseker (Village), Black Diamond (Town), Carstairs (Town), Chestermere (City), Cochrane (Town), Cremona (Village), Crossfield (Town), Didsbury (Town), Eden Valley 216 (Indian reserve), Foothills No. 31 (Municipal district), High River (Town), Irricana (Town), Longview (Village), Mountain View County (Municipal district), Okotoks (Town), Olds (Town), Rocky View County (Municipal district), Sundre (Town), Tsuu T'ina Nation 145 (Indian reserve), Turner Valley (Town).

Census Metropolitan Area (CMA)
An urban Census metropolitan area (CMA) is an area consisting of one or more neighbouring municipalities situated around a major urban core. A CMA must have a total population of at least 100,000 of which 50,000 or more live in the urban core. The Calgary CMA includes Airdrie (City), Beiseker (Village), Calgary (City), Chestermere (City), Cochrane (Town), Crossfield (Town), Irricana (Town), Rocky View County (Municipal district), and Tsuu T'ina Nation 145 (Indian reserve).

Commodities
Commodities are tangible goods that can be bought and sold in spot or futures markets. Commodities are goods that are usually produced and/or sold by many different companies. A commodity is uniform in quality between companies that produce/sell it in the sense that we cannot tell the difference between one firm's product and another. Examples of commodities include oil, electricity, metals, cement and agricultural products, such as wheat, corn, and rice.

Consumer Price Index (CPI)
The Consumer Price Index (CPI) is an indicator of the consumer prices encountered by consumers. It is obtained by calculating, on a monthly basis, the cost of a fixed "basket" of goods purchased by a typical consumer during a given month. The basket contains products from various categories, including shelter, food, entertainment, fuel and transportation. Since the contents of the basket remain constant in terms of quantity and quality, the changes in the index reflect price changes. The CPI is a widely used indicator of inflation (or deflation) and indicates the changing purchasing power of money in Canada.

Developing and Emerging Market Economies
This group of countries (155) includes developing economies that are low- and middle-income countries, and emerging economies that are in transition from developing economies to developed countries. Some of the largest countries in the world like India, China, Brazil, and Indonesia are emerging economies.

Economic Region
An economic region (ER) is a grouping of complete census divisions (CDs) created as a standard geographic unit for analysis of regional economic activity.

Economy
The term economy refers to the institutional structures, rules and arrangements by which people and society choose to employ scarce productive resources that have alternative uses in order to produce various goods over time and to distribute them for consumption, now and in the future, among various people and groups in society. In a free market economy like Canada's the laws of supply and demand determine what, how and where goods and services should be produced, who should consume them and when. A "strong' or "healthy" economy is usually one that is growing at a good pace.

Employment Rate
The number of employed people expressed as a percentage of the working age population.

European Union
A political and economic union of 27 member states that are located primarily in Europe. The IMF expects the European Union to account for over 14 per cent of global GDP in 2024. Some of the largest economies that are EU member states include Germany, France, Italy, Spain, and the Netherlands.

Federal Funds (or "Fed Funds") Rate
Set by the Federal Open Market Committee of the U.S. Federal Reserve, the Fed Funds rate is the target interest rate at which commercial banks borrow and lend their excess reserves to each other overnight. Domestically, the Fed Funds rate is analogous to the Bank of Canada's overnight rate (also known as the "policy interest rate").

Fiscal Policy
Also called budgetary policy, the overall program for directing government spending and taxation for the purpose of keeping the actual Gross Domestic Product (GDP) close to the potential full employment GDP, but without overreaching that potential and causing inflation.

Federal Reserve
The Federal Reserve System is the central bank of the United States tasked to provide monetary and fiscal stability to the economy.

G7
The international Group of 7 (G7) consists of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The G7 comprises of the world's largest advanced economies and liberal democracies. With its members accounting for over half of global net wealth, the G7 is seen as highly influential in global affairs.

Gross Domestic Product (GDP)
GDP is a measure of the value of all goods and services produced by the economy. Unlike Gross National Product (GNP), GDP only includes the values of goods and services earned by a region or nation within its boundaries.

Hard Landing
Hard landing refers to a scenario in economics in which an economy experiences a steep decline in its economic activities after a growth period. A vital difference between soft landing and hard landing is that the former does not cause recession.

Henry Hub
Henry Hub is a natural gas pipeline in Louisiana that serves as the pricing and delivery location of natural gas futures on the New York Mercantile Exchange (NYMEX).

Housing Markets
Consists of two markets: new house and re-sale markets referred to as MLS® (Multiple Listing Service). Each is described by different parameters and followed closely by different statistical bodies: the Planning and Building Department with The City of Calgary and Statistics Canada for new houses, and The Canadian Real Estate Association for the re-sale market.

Housing Units
A general term that refers to single-family houses, townhouses, mobile homes and/or condominiums.

Housing Starts
A housing start is defined as the beginning of construction work on a building, usually when the concrete has been poured for the whole of the footing around the structure, or an equivalent stage where a basement will not be part of the structure.

IMF
The International Monetary Fund (IMF) is an organization created in 1945, governed by and accountable to the 190 countries that make up its near-global membership. The IMF's primary purpose is to ensure the stability of the international monetary system—the system of exchange rates and international payments that enables countries (and their citizens) to transact with each other.

Index
An economic tool that allows for data comparison over time. An index number is used to indicate change in magnitude (cost or price) as compared with the magnitude at some specified time.

Industrial Product Price Index (IPPI)
The Industrial Product Price Index (IPPI) measures price changes for major commodities sold by manufacturers. The prices collected are for goods sold at the factory gate. As a result, the prices covered by the IPPI refer not to what a purchaser pays, but to what the producer receives.

Inflation Rate
A measure of the percentage change in the Consumer Price Index for a specific period of time.

Labour Force
The working age population (aged 15+) who are actively involved in the labour market, which includes those employed and unemployed people. It does not include people who are at their working age but not working or looking for work (e.g., retirees or full-time students).

MLS®
The Multiple Listing Service, or MLS®, is a local or regional service that compiles available real estate for sale submitted by member brokers and agents, along with detailed information that brokers and agents can access online.

Monetary Policy
Refers to government measures undertaken to affect financial markets and credit conditions with the ultimate objective of influencing the overall behaviour of the economy. Monetary policy is usually the responsibility of the central banks, such as the Bank of Canada.

Non-Residential Construction Price Inflation
Non-residential construction price inflation measures the overall price escalation seen in the construction of non-residential buildings. This indicator includes the impact of input prices, labour costs, taxes, fluctuating profit margins and the effect of the overall economy on demand for local non-residential construction projects.

OPEC
The Organization of Petroleum Exporting Countries (OPEC) is an organization of 12 oil producing countries (Algeria, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates, and Venezuela) that seeks to actively manage oil production in its member countries by setting production targets. OPEC member countries typically produce 40 to 50 per cent of the world's crude oil, and Saudi Arabia is OPEC's largest producer. OPEC is described by most market observers as a cartel whose actions, particularly those by Saudi Arabia, serve as a major influence on global oil production and price.

OPEC+
OPEC+ was established in 2016 amid a global economic slowdown and strong production from U.S. shale producers to stabilize oil prices by jointly cutting production among its members. OPEC+ describes the 12 members of OPEC plus 10 oil exporting non-OPEC countries (Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan). Russia is the largest and most influential oil producing member of OPEC+ who is not a formal member of OPEC.

Overnight Rate
The overnight interest rate is the rate for overnight (between business days) lending among major banks in Canada. It is typically the lowest of all types of interest rates and influences other interest rates. The Bank of Canada sets the target for the overnight rate as one way to conduct monetary policy. Major banks can deposit money overnight with the Bank of Canada and receive an interest rate equal to the target rate (the "deposit rate") or borrow money from the Bank of Canada at a rate one-quarter of a percentage point higher (the "bank rate").

Quantitative Tightening
A contractionary monetary policy implemented by central banks in order to reduce liquidity or reduce money supply. This is usually done by the central bank reducing its assets on the balance sheets.

Raw Materials Price Index (RMPI)
The Raw Materials Price Index (RMPI) measures price changes for raw materials purchased for further processing by manufacturers. As a purchasers' price index, prices include all charges purchasers incur to bring a commodity to the establishment gate. They include transportation charges, net taxes paid, custom duties, as well as subsidies, if applicable.

Soft Landing
A soft landing is the goal of a central bank when when it implements contractionary monetary policies just enough to stop an economy from overheating and experiencing high inflation without causing a severe downturn. It is the process of an economy shifting from growth to slow growth to potentially zero growth as it approaches but avoids a recession.

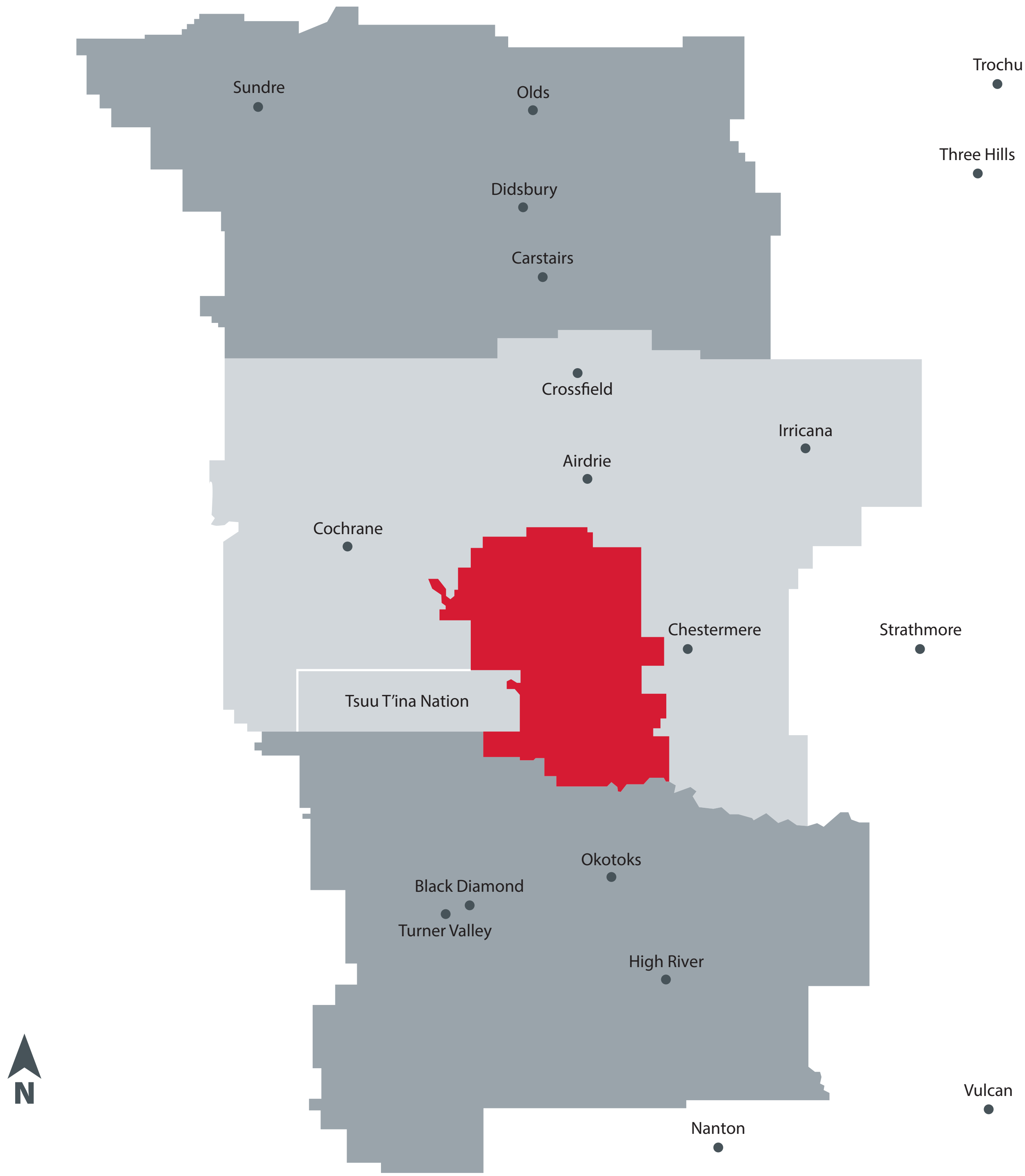
Unemployment Rate
In Canada, the unemployment rate measures the number of unemployed people 15 years of age and over as a percentage of the total labour force (employed and unemployed people) 15 years of age and over.

WCS
Western Canadian Select (WCS) is the benchmark for emerging heavy, high TAN (acidic) crudes, one of many petroleum products from the Western Canadian Sedimentary Basin oil sands.

Working-Age Population
Describes people aged 15 to 64.

WTI
West Texas Intermediate (WTI) crude oil is the underlying commodity of the New York Mercantile Exchange's oil futures contracts. Light, sweet crude oil is commonly referred to as "oil" in the Western world.

Calgary Economic Region Map



Legend

Calgary Economic Region (CER)

Calgary Census Metropolitan Area (Calgary CMA)

City of Calgary

Who We Are

Corporate Economics provides services in four areas: forecasting, information provision, policy analysis and consulting. We also monitor the current economic trends which allows us to develop unique insights on how external events are impacting the local economy and the Municipal government. We are experienced at researching different economic topics and have developed reliable methods of forecasting and analysis.

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Many of our publications are available on the internet at **www.calgary.ca/economy**.

Sources:
Bank of Canada, Calgary Real Estate Board (CREB), Canada Mortgage and Housing Corporation (CMHC), Canadian Real Estate Association (CREA), Conference Board of Canada, Federal Reserve Bank of the U.S., Government of Alberta, Government of Canada, International Monetary Fund (IMF), Organization of the Petroleum Exporting Countries (OPEC), Statistics Canada, Stokes Economics, The City of Calgary, U.S. Energy Information Administration (EIA), World Bank, and others.