Calgary

Spring 2023

Calgary and Region Economic Outlook

2023-2028

Executive Summary

The primary takeaway is that Calgary should avoid a recession in 2023 and achieve the coveted soft landing. The higher interest rate environment will affect the conviction to deploy capital and investment levels. Record migration into 2023 and strong (but unspectacular) energy prices, labour supply, wage growth and earnings should support strong consumer spending and a resilient economy.

Executive Summary

1. Lower but positive local and regional economic growth in 2023, not a recession, driven in large part by strong energy sector cashflows

Alberta's crude oil exports doubled over the last 11 years to 3.489 million barrels a day in 2022 from 1.747 million barrels a day in 2011. That's a blistering average annual 6.5 per cent growth rate. Pipeline exports represented 86 to 91 per cent of annual exports over that period. Robust Alberta crude oil production has supported strong export growth. Specifically, Canadian crude oil production's average annual growth rate was 4.5 per cent over those 11 years compared with 5.5 per cent for Alberta. Alberta's 2022 crude oil production represented 83 per cent of Canadian production, up modestly from 2021 (82 per cent) and significantly from 2011 (74 per cent).

From 2023 through 2028, crude oil export growth should continue. However, the export growth rate should decelerate. That's under both the 'current policies' scenario (2.0 per cent) and 'evolving policies' scenario (1.5 per cent) developed by the Canada Energy Regulator in 2021[1]. Recently, the Minister of Natural Resources requested an additional scenario consistent with Canada achieving net-zero emissions by 2050[2]. The 'current policies' scenario assumes business as usual. The 'evolving policies' scenario assumes less global demand for fossil fuels and increased use of low-carbon technologies.

In 2022, the average price of Canadian crude oil exports exceeded U.S.$80 per barrel for the first time since 2013. The Fall 2022 Economic Outlook correctly forecasted record export value in 2022, which ended up at $150.4 billion. That's a 49 per cent increase from $100.8 billion in 2021. High prices and export volumes were a boon for industry cash flows. For the forecast horizon, the average annual price for Western Canadian Select (WCS) and West Texas Intermediate (WTI) should lie between the highs of 2011-2014 and the lows of 2015-17. With more substantial export volumes but lower prices, Canadian crude oil exports should yield over $100 billion in 2023. Overall, Alberta had a $374 billion economy in 2021 – making multi-billion dollar cash flows from crude oil export growth supportive. Trans Mountain pipeline expansion becoming operational in 2023 should improve export market access for the forecast period and lower the price discount between WCS and WTI.

Alberta's natural gas production declined at an annual average rate of 1.9 per cent from 2001 (14.45 billion cubic feet a day) to 2021 (9.82 billion cubic feet a day). Simultaneously, natural gas demand increased at an average annual rate of 3.4 per cent. Most of the demand growth was for oil sands production, with an average yearly growth rate of 9.2 per cent and rapidly approaching one out of every three units of provincial use. Electricity generation is the next significant source representing about one out of every four units of Alberta natural gas demand. Apart from demand growth, the other reason for declining export volumes (annual average of -5.9 per cent between 2001 and 2021) is increasing production in the U.S., Canada's only export market by pipelines. Additional export markets for liquified natural gas (LNG) and the growing perception of natural gas as a clean burning fossil fuel should halt export decline. It offers upside opportunities beyond those in the forecast estimates.

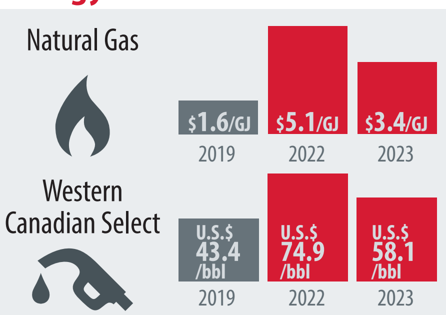
In 2023, additional pipeline capacity should materialize when the North Corridor expansion to the primary Nova Gas Transmission Limited (NGTL) system comes in-service. With demand growth exceeding supply growth, there is upward pressure on prices. The benchmark Alberta natural gas price at the Alberta Energy Company (AECO) hub should average $3.4/GJ in 2023 before gradually increasing to $4.3/GJ by 2028 as supply expands. The price differential between AECO-C and Henry Hub (the North American benchmark) should ease as pipeline capacity improves.

The exchange rate should average U.S.$0.76 per CAD$ between 2023 and 2026. Exchange rate stability relative to the 2019 to 2022

1 Further information on the two core scenarios in Canada's Energy Future 2021 report, the 'evolving policies' scenario and the 'current policies' scenario, and the assumptions that underpin those scenarios can be found here.

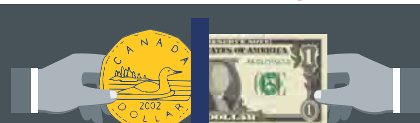
2 Further information on the additional scenario requested by the Minister of Natural Resources can be found here.

Energy Prices



The Western Canadian Select **oil price** and the AECO-C **natural gas price** would decline slightly from decade-long highs but remain strong enough to attract capital investment.

Canada/U.S. Exchange Rate



U.S.$ for 1 C$

2028	**0.77**	2022	**0.77**
2023	**0.74**	2021	**0.80**

The weakness of the **loonie** should continue into 2023 because U.S. Fed interest rate increases would increase the demand for the U.S.$ in 2023 before the loonie gains strength later in the forecast horizon.

GDP Growth Comparison

In 2023, the **real GDP growth rate** for the regional economy would be behind the global economy but strong enough to stay ahead of the provincial, Canadian, and U.S. economies.

Calgary CER	**2.6%**
Alberta	2.5%
Canada	0.8%
U.S.	1.3%
World	2.8%

average should support trade, as trading partners benefit from increased price certainty. For the oil and gas industry, growth in crude oil exports to U.S. markets alongside a stable dollar would translate into steady cashflows for businesses in and around the oil and gas industry and support a strong economy.

2. Housing, non-residential and business fixed investment levels should decline in 2023 after the 2022 surge as businesses exercise caution in the face of uncertainty

Aggregate CER investment levels should decline in nominal and real terms after the surge in 2022 as businesses exercise caution in the face of economic slowdowns in Canada and the U.S. In comparison, Alberta investment levels should increase in nominal terms because of an uptick in oil and gas investment but decline in real terms.

A key driver is higher financing costs for new investment projects – now at their highest since 2008. It is due to significant Bank of Canada interest rate hikes. The hikes took the prime lending rate from a 2021 average of 2.5 per cent to a 2022 average of 4.2 per cent. It should increase into early 2023, averaging 6.1 per cent before decreasing in late 2023 and through 2024 (average prime lending rate of 5.4 per cent in 2024) as the Bank of Canada shifts to monetary easing after successfully cooling inflation.

Historically, declining investments were an early warning signal for a potential swing in economic fortunes. Specifically, a forward-looking annual survey of investment intentions by the Canadian government indicated significant declines for Alberta, especially for the oil and gas industry, from 2014 to 2015 and again from 2019 to 2020 and foreshadowed the last two CER recessions. However, it is an imperfect predictor because there have been periods of investment decline that did not lead to recessions. In those cases, the key feature was the need to resolve capital investment and labour supply imbalances, which is consistent with the current situation.

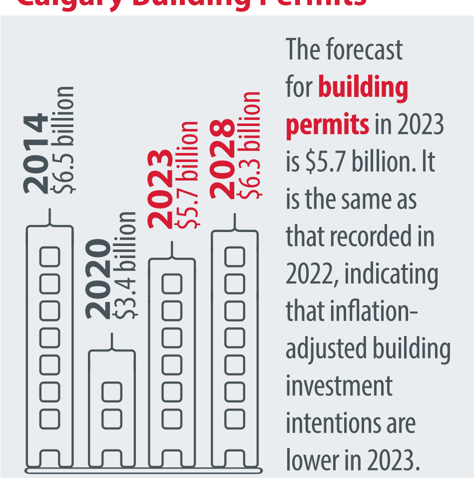
Investment should decline in 2023 at a negative double-digit pace (contrary to the Fall 2022 Economic Outlook expectations - a notable update) but recover in 2024 as the business community should receive a confidence boost from the CER's ability to skirt negative economic growth in 2023. A recovery with positive growth should follow between 2024 and 2028, albeit at a decelerating pace. The two industries expected to experience the most significant investment decline in 2023 are transportation and education, driven by higher prices for transportation equipment and a slowdown in post-secondary education investments. Manufacturing is one of the two industries that would be the most resilient with real investment growth, which will recover after a three-year slump that halved investment levels. The other industry is the professional, scientific, and technical services industry which should experience a focus on expanded capacity as well as the 'tech' sector.

Housing investment should decline in 2023 primarily because of higher interest rates. Total housing starts reached a record high of 14,800 units in 2022. Builders responded positively to solid demand growth in 2022. For 2023 and beyond, the challenge of homebuyer affordability will encourage multi-family units. It should limit the reduction in the total number of housing starts in the city of Calgary to 13,100 in 2023. Between 2024 and 2028, the annual average number of dwellings started should decline to 10,300 units after exceptional levels for 2021 to 2023, barring any policy incentives encouraging higher levels.

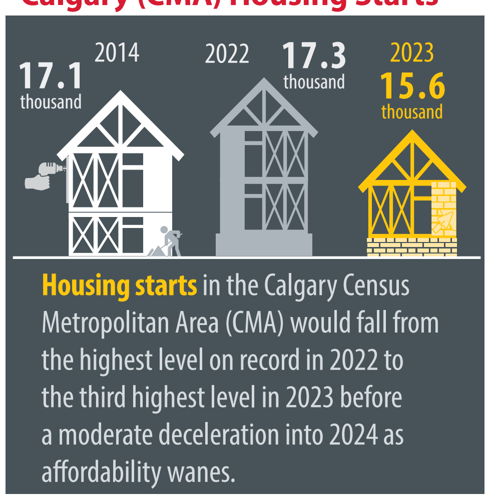
House price appreciation should slow in 2023, given the housing market's weakness. Between 2024 and 2028, average house price appreciation should average 2.6 per cent, while the benchmark house price appreciation averages 2.3 per cent as both converge because of an expected rebalancing of housing-type sales and pricing.

In 2022, the value of building investment intentions in Calgary over the coming year or two was robust at $5.7 billion. It has sustained economic growth into Q1 2023. Two of every three investment dollars in new buildings get directed at residential properties. For 2023, like other investment categories, total building construction investment intentions should slow due to higher borrowing rates which dissuade investment activity. However, the construction inflation is expected to keep investment needed for targeted additional units steady at $5.7 billion. Building construction investment intentions should gradually increase between 2024 and 2028, averaging $6.0 billion annually, as solid population growth and slightly lower borrowing costs emerge over the forecast horizon.

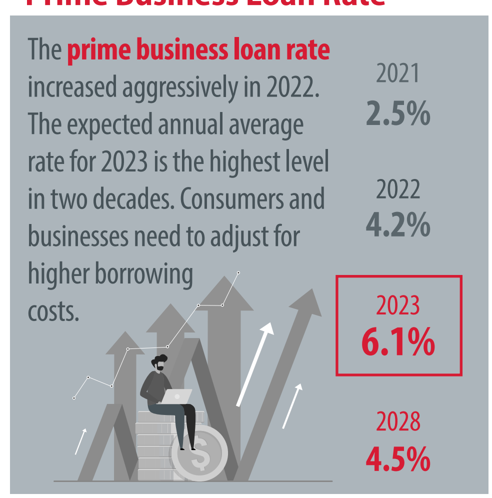
Calgary Building Permits



Calgary (CMA) Housing Starts



Prime Business Loan Rate



3. Strong population and labour force growth would help address high job vacancies with economy-wide earnings boosting consumption and offsetting investment decline

The City of Calgary's estimate for the local population as of April 1, 2023, is 1,389,200. The annual rate of population increase was about 40,600 people or 3.0 per cent, which is an acceleration from 2.0 per cent in 2022. The implication is that population growth has created the platform for a 3.0 per cent growth in personal consumption spending before accounting for inflation. Personal consumption spending is the main contributor to local GDP growth representing about three out of every five dollars of economic activity in Calgary.

The 'real' growth in personal consumption spending should lag behind population growth because of high inflation. Although Calgary's population increased at a record pace between April 2022 and April 2023, the annual inflation rate was at a 40-year high. High inflation dissuades expenditures on large ticket items and should reduce inflation-adjusted consumer spending.

Calgary's population should increase by 108,400 people between 2023 and 2028. The number of elementary and pre-elementary school-aged children (zero to nine years) should achieve a forecast horizon peak of 162,600 in 2024 before declining to 161,700 by 2028. It is due to declining birth rates in Calgary. In contrast, the number of high school youth and graduates eligible for post-secondary education (aged 15 to 19) should increase from 78,300 in 2023 to 87,800 in 2028. That's an annual average 2.3 per cent growth rate. It suggests benefits from a focus on Calgary youths.

By 2028, the number of seniors aged 65 to 79 should increase by 39,800 from 141,600 in 2023. That's a rapid annual average growth rate of 5.1 per cent attributable to the baby boomers. It means that Calgary will continue to experience population aging. By 2028, the average age in Calgary should rise to 39.9 years, compared to 38.6 years in 2023. Similarly, the proportion of seniors (65 years and older) in the total population should increase to 15.5 per cent by 2028, compared to 13.1 per cent in 2023. It will increase the share of the retiring population and put downward pressure on the effective size of the labour force.

The Fall 2022 Economic Outlook forecasted that the CER labour force should hit one million people sometime in 2023. That expectation is sustained. The size of the CER workforce should rise to a full-year average of 1,027,800 people in 2023. Significant net migration, especially of people aged 35 to 49 years, has been crucial for labour force growth. However, for the first time, the cohort aged 65 to 69 would experience more additions than any other cohort over the five years from 2023 to 2028. As a result, the labour force participation rate would decline from 71 per cent in 2023 to 70 per cent by 2028.

Job creation should slow to 3.1 per cent in 2023 after a blistering 7.3 per cent pace in 2022. That represents an addition of 28,600 net new jobs in the CER in 2023. The slowdown in job creation is the result of a shift from getting workers to getting the right match between job seekers and employers. More workers alongside real wage growth should increase economy-wide earnings and boost consumer spending in 2023. In line with investment growth, the two industries that should experience the fastest pace of job growth are the manufacturing and the professional, scientific, and technical services industries. The growth in manufacturing industry jobs is from a small base (3.9 per cent of CER workers in 2022), which would make it less prominent in upcoming labour force survey releases. Between 2024 and 2028, the average annual rate of job growth should decelerate to 2.2 per cent.

The average annual unemployment rate should stay above 6.0 per cent until 2026. That's because job growth over the next few years would only slightly exceed labour force growth. As a result, the CER unemployment rate should exceed the Canadian average without new policy developments that encourage faster job growth.

4. Divergence across four inflation categories in 2023 – declining average house prices, decelerating consumer price inflation, positive wage inflation, and significant construction inflation

There are five generally accepted significant drivers of global inflation from 2020 to 2022:

Five-Year Population Growth

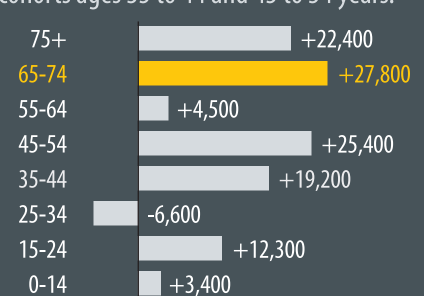
+108,400 (2023 to 2028)

Calgary's population should increase by 108,400 between 2023 and 2028, down from 121,900 between 2018 and 2023. The slowdown is due to **the inability to repeat record 2022-23 net migration and slightly lower birth rates**.

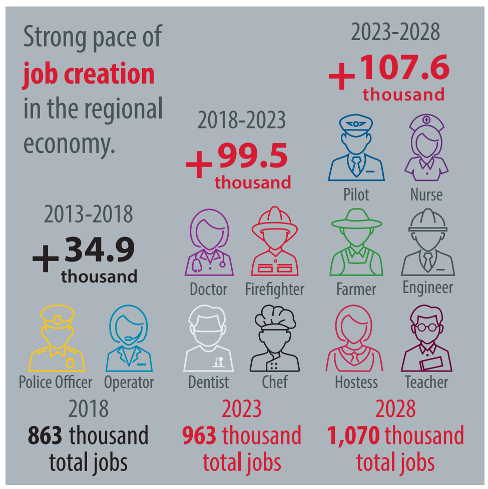
+ 121,900 (2018 to 2023)

Population Increase by Cohort

The 10-year **cohort of seniors** ages 65 to 74 should experience the most substantial increase over the next five years from 2023 to 2028, outpacing the growth in the larger cohorts ages 35 to 44 and 45 to 54 years.



Five-Year Job Growth



1. a shift in demand toward goods and away from services as fewer people held their jobs with COVID-19 pandemic restrictions, and many of those that did work needed fewer services and more durable goods including home office equipment
2. aggregate stimulus through about U.S.$16.9 trillion in fiscal measures globally as households ran down savings and stimulus transfers, leading to a surge in aggregate demand post-pandemic
3. supply chain bottlenecks due to lockdowns and mobility restrictions led to severe disruptions in various supply chains and short-term supply shortages
4. a shock to labour supply with layoffs and the adverse result of labour force participation staying below pre-pandemic levels in many jurisdictions long after restrictions got lifted
5. supply shocks to energy and food because of the Russian invasion of Ukraine – Russia and Ukraine export major commodities (e.g., 30 per cent of global wheat exports).

The top two are demand-pull factors, while the others are cost-push factors. With the goal of achieving a soft landing, the Bank of Canada has used interest rate hikes and quantitative tightening to cool demand-pull inflation. However, it has been insufficient to address cost-push inflation. Nevertheless, evidence shows that the cost-push factors driving inflation have eased. The Global Supply Chain Pressure Index, or GSCPI, declined from a record peak of +4.32 (supply chain challenges four times worse than average) in December 2021 to -1.06 (better than average) by March 2023.

For Calgary consumers, slower increases in the cost of living in 2023 are a relief from the sharp increase in 2022. Specifically, after a 7.2 per cent increase in 2022, the average annual growth in consumer price inflation should decelerate to 3.8 per cent in 2023. The sources of 2023 consumer price inflation in order of the magnitude of their expected contribution to inflation are:

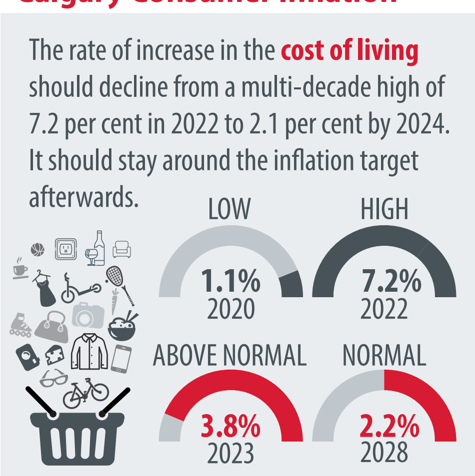
- Positive food inflation (16 per cent of the consumer basket): production increases by other countries will not fully offset disruptions due to the Russia/Ukraine conflict (both are important suppliers of agricultural commodities).
- Positive shelter inflation (26 per cent of the consumer basket): higher mortgage costs will drive up homeownership costs. Prices in the rental market would also strengthen, given the inadequate supply.
- Negative transportation inflation (18 per cent of the consumer basket): gasoline and diesel prices should decline because of lower global oil prices resulting from supply outpacing demand.
- A relatively stable Canadian dollar relative to the U.S. dollar should help avoid higher prices for imported consumer goods and services because of the exchange rate.

Strong consumer price inflation (7.2 per cent) and house price inflation (4.9 per cent) in 2022 should decelerate. In 2023, consumer price inflation should average 3.8 per cent as transportation inflation reverses course. Also, house prices should decline (-3.0 per cent).

For businesses, there would be significant upward pressure on labour costs as Alberta wage inflation stays high at 3.5 per cent in 2023. Wage growth would decelerate in 2024, to 2.4 per cent, as labour supply keeps up with demand. The municipal government is not immune to a competitive labour market, which would lead to additional operating cost pressures putting upward pressure on taxes.

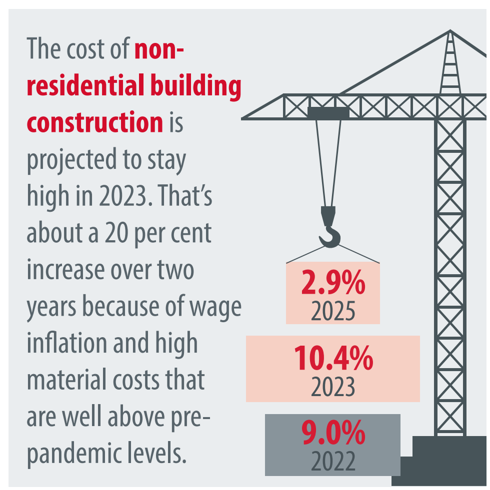
One useful measure of the cost of private sector capital investment and government investment is non-residential building construction inflation. The sustained increase in prices for non-residential building construction is anticipated to increase to 10.4 per cent in 2023, reflecting the increase in wages, rising energy and financing costs, and sustained high prices for some underlying construction commodities like steel, iron, and wood above pre-COVID-19 levels. Increased costs, particularly for inputs like steel, have driven up non-residential construction costs in Calgary. Steel-finished building materials like rebar, framing and commercial plumbing pipes face significant impacts. Rising energy costs and interest rates have also factored into increasing building costs. Due to fixed price contracts with multi-year terms, not all of the cost increases of recent years show up in current data, and those increases will continue to make their way into contracts in 2023.

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 to 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	Though the average growth of the world economy is expected to be higher for the current service plans and budget cycle than the previous one, global growth is projected to fall from 3.4 per cent in 2022 to 2.9 per cent in 2023. The war in Ukraine and increasing financing costs continue to weigh on economic activity. It will impact consumer confidence and spending in Calgary.
The United States			
Real Gross Domestic Product Growth (%)	1.9	1.4	Slowing momentum in the U.S. economy will weigh on demand for Canadian exports in this cycle. Canada's energy exports, however, are expected to outperform non-energy exports.
Canada			
Real Gross Domestic Product Growth (%)	1.4	1.3	Canada's economic growth is expected to be limited in 2023, before gradually picking up in 2024. The average rate of economic growth in Canada will be slightly lower in the current service plans and budget cycle than the previous one, sustaining interprovincial trade.
Prime Business Loan Rate (%)	3.3	5.3	Interest rates will stay elevated in the current cycle due to the Bank of Canada's efforts to control inflation. This will curb investment incentives and household spending and increase The City's borrowing costs.
Exchange Rate (U.S.$ for 1C$)	0.77	0.76	The exchange rate between U.S. and Canadian dollars is expected to remain stable in the current cycle. This should support trade as trading partners benefit from increased price certainty.
Alberta			
Real Gross Domestic Product Growth (%)	0.4	2.2	Alberta's economy expects higher growth rates in the 2023-2026 cycle than in the previous one. The City benefits from the Province's much improved fiscal situation and strong economic activity.
Total Employment Growth (%)	1.2	2.1	Strong employment growth in Alberta indicates a tight labour market in the province. Employers in Calgary will have a more challenging time finding workers and competing against the rest of Alberta.
Unemployment Rate (%)	8.1	5.8	A lower unemployment rate in the 2023-2026 cycle leads to reduced demand for social assistance programs from The City as the number of unemployed persons reduces.
Housing Starts ('000 units)	29.9	32.9	Strong residential investment will contribute to the economic growth within the province, as relative affordability and international migration keep demand robust in this cycle.
Inflation Rate - CPI (%)	3.1	2.4	With the monetary policies tightening by the Bank of Canada, inflation is expected to moderate in the current cycle. This should reduce pressure on City expenditures.
West Texas Intermediate - WTI (U.S.$/bbl)	64.8	77.0	Oil prices will remain elevated in this cycle compared to the previous one. Volatility is expected, which prompts The City to explore countercyclical fiscal policy options to help moderate the impact of economic fluctuations.
Western Canadian Select - WCS (U.S.$/bbl)	50.1	59.5	Expanded access to markets and improved refinery capacity for Alberta heavy crude would sustain a lower price difference between WCS and WTI for this service plans and budget cycle.
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.1	3.8	Higher natural gas prices in this cycle will increase operational costs for businesses and cost of living for households. Although this will yield higher franchise fees for The City, operating expenditures for some City services will increase.
Industrial Product Price Index (%)	6.6	0.6	Price growth for finished products should subside from the surge in 2021 and 2022, resulting in a lower average in the 2023-2026 cycle than the previous one. This should reduce some inflationary pressures for The City.
Raw Materials Price Index (%)	11.3	-1.9	Raw material prices are expected to decline in this cycle from the price spike experienced in the previous two years, which should moderate cost pressures for businesses.
Alberta Average Annual Wage Rate Growth (%)	1.6	2.7	Higher wage growth in the current cycle will raise incomes and improve affordability. However, it will also increase the cost of labour, contributing to an inflationary spiral 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			
Real Gross Domestic Product Growth (%)	1.1	2.8	Solid growth is expected for the Calgary Economic Region in this service plans and budget cycle, supporting recovery in the non-residential tax base.
Total Employment ('000 people)	882.7	996.7	Job growth will expand the consumer base and increase demand for housing and services in the region.
Total Employment Growth (%)	2.1	2.5	The job growth rate will remain strong in this cycle, continuing to create solid demand for City services and infrastructure.
Unemployment Rate (%)	8.4	6.2	A falling unemployment rate in this cycle will increase the competition for skilled workers and reduce demand for social services that support the unemployed. A tighter labour market also indicates increasing pressures on labour costs for The City.
Calgary Census Metropolitan Area (CMA)			
Housing Starts ('000 units)	13.4	13.4	Housing investments in the Calgary area are expected to be slightly lower in the coming budget cycle as growth in Calgary's neighbouring municipalities remains strong. The City faces competition from surrounding areas in attracting housing demand and investments.
Inflation Rate - CPI (%)	3.2	2.5	Increases in consumer prices are expected to decelerate in this cycle after the spike in 2021 and 2022. This will help Calgarians mitigate the pressures from rising cost of living. More stability in the cost of goods and services helps limit the risks of cost overruns and budget adjustments.
Non-Residential Building Price Inflation (%)	3.9	4.9	Non-residential construction costs are expected to continue to rise in this cycle, weighing on non-residential building activities, including The City's infrastructure investment.
City of Calgary			
Demography			
Total Population ('000 people)	1,315.7	1,422.9	A larger total population indicates higher demand for municipal services and infrastructure. It also means that the residential property tax base would increase.
Total Population Growth (%)	1.6	1.9	Calgary's population growth is expected to be higher in this cycle than the previous one, driven by robust net migration in the forecast period. This could generate additional pressure on certain City services.
Net Migration ('000 people)	11.9	19.2	Calgary has seen strong migration and expects the trend to continue in 2023. This should support consumption and demand for housing and mitigate the labour market tightness in Calgary.
Household Formation ('000 units)	7.5	10.4	The higher household formation in the current cycle supports higher demand for residential spaces, indicating a larger residential tax base and increased demand for City infrastructure and services.
Real Estate			
Residential Market			
Housing Starts ('000 units)	11.5	11.1	Slightly lower but stable residential construction activity in the current cycle will 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	1.4	Home affordability in Calgary will remain challenging for new housing market entrants as housing prices continue to grow in the current cycle, though at a lower rate. This should increase the supply of new housing units and reduce the pressure on property tax growth for existing homeowners.
Benchmark Home Price Growth (%)	5.1	1.7	Benchmark home price growth should also moderate in this cycle. Housing prices are expected to stabilize as the sales of housing units rebalance to standard features in 2023.
Total Building Permits ($billions)	4.9	5.8	Stable growth in residential and non-residential construction, increases in the price of real estate, and 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 weaker global economy due to the Russia/Ukraine conflict and higher global prices, global financial market volatility, and global commodity demand and prices.

1

Global GDP Outlook

The forecast risks remain **tilted to the downside** on the global GDP growth, but **adverse risks have moderated** since the Fall 2022 Economic Outlook. On the upside, China's economy should improve in 2023 with the lift of its zero-COVID policy. European economic growth has been more resilient than expected. Three factors that increase downside risk. First, uncertainties remain with the war in Ukraine. Second, higher global financing costs could worsen the debt burdens. Third, persistent inflation could hamper global economic progress beyond currently anticipated levels.

2

Global Commodity Prices and Outlook

The war in Ukraine continues to disrupt global commodity supply, especially agricultural and energy commodities. The global supply chain should improve while demand for most commodities should moderate due to the slowdown of global economic growth. China's economic recovery from lifting its COVID-19 restrictions should support the demand for crude oil and agricultural products in the global market in 2023 beyond currently anticipated levels, which **poses an upside risk to commodity prices for Calgary and Canada**.

3

Policy Divergence and Financial Market Volatility

With elevated global inflation, many central banks continue to tighten their monetary policies to cool inflation down. The full impact is unlikely to be realized quickly, which creates **the risk of monetary policy divergence as some countries implement further policy rate increases when others are more patient**. Global financial markets remain highly sensitive to inflation news. Investment growth should remain subdued with high debt levels after significant pandemic-related government spending, lower economic growth, and higher borrowing costs. **These factors point to global financial market volatility**.

Risks from policy differences across Canada or policies targeting average conditions in Canada:

Significant factors that could alter actual economic performance include – the downside pressure on household wealth, upward wage pressures, and environmental policy divergence that creates business investment uncertainty.

4

Household Wealth and Consumer Spending

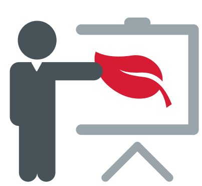
Higher interest rates and lower real income **continue to put downward pressure on Canadian households' wealth and spending patterns**. The increase in borrowing costs worsens household debt burden, with higher mortgage interest payments and costs of financing big-ticket items. Real income growth for Canadians has been paltry in recent years. Significant inflation will take all of 2023 to moderate. Given the toll of multi-year high inflation, it could risk subduing consumer spending on goods and services beyond normal levels.

5

Wages and Labour Market Balance

The labour supply challenge continues for Canadian businesses, especially for labour with desired skills and experience. This situation should put **upward pressure on wages throughout Canada beyond currently anticipated levels**. It would benefit workers after years of real wage declines. Three factors have contributed to the labour shortage – an aging workforce, mismatched skillsets, and the interruption of immigration during the pandemic. Immigration levels have rebounded significantly since the borders reopened, which should partly mitigate the labour market imbalance.

6



Environmental Policy Coherence vis-à-vis Divergence

The risk continues from heightened tensions between federal and provincial governments on environmental policy and the pace of policy implementation. The proposed Clean Electricity Regulation is a good example. Environmental policy divergence between municipal, provincial, and federal governments **will create uncertainty and restrain business investment**. Uncoordinated incentives will drag down the efficiency of the green transition and make the future of environmental policy across governments ambiguous, unlike the rally behind the Inflation Reduction Act south of the border.

Risks from potential changes in Alberta provincial government policies:

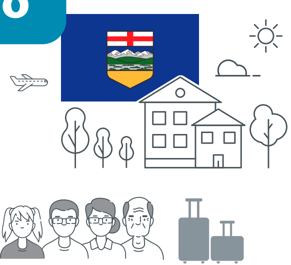
Significant factors that could alter actual economic performance include three uncertainties – oil and natural gas prices and exports, migration levels and the impact on the labour market, and the pace of inflation deceleration.

7

Oil and Natural Gas Prices and Exports

A slower global economic outlook and ongoing geopolitical tensions have created uncertainty and price volatility for the energy market. Completing the Trans Mountain Expansion (TMX) in 2023 should boost Alberta's crude oil transportation capacity. For the forecast horizon, it could reduce the differential between West Texas Intermediate (WTI) and Western Canadian Select (WCS). A lower discount would support **even higher oil and gas industry cashflows generating positive forecast risk**.

8



The Level of Net Migration

Alberta is expected to experience strong net migration in 2023. The trend should continue for the forecast horizon, driven by a surge in international migration. All categories of migrants are higher, including newcomers from Ukraine, temporary foreign workers and international students. Robust interprovincial net migration also supports population growth. Higher net migration levels beyond those incorporated in the forecast should **further boost Alberta's population growth, support consumption and residential investment in the provincial and CER economies and help mitigate the labour market tightness**.

9

The Speed of Inflation Deceleration to Normal Levels

Inflation should subside gradually in 2023 due to the slowdown in energy prices, easing supply chain disruptions, and aggressive interest rate hikes by the Bank of Canada over the past year. Inflation in goods should moderate faster than service inflation, as inflation in services is affected by the pass-through impact of labour costs. Ordinarily, inflation should return to its pre-pandemic levels by 2024. However, there is **uncertainty in the pace of inflation deceleration which could mean higher inflation for longer than anticipated**.

Risks from local and regional private and public-sector influences:

The potential for a lower level of private (non-residential) investment, a significant workforce and consumer market boost from immigration, and uncertainty associated with wage pressures.

10

Business Environment and Investment Levels

Although Calgary should continue its robust economic growth, the business environment faces multiple challenges. Construction costs increased significantly over the past year. Higher interest rates and competition for credit will increase financing costs for businesses. **There are downside risks if the level of business investment caution persists**. It would mean that many Calgary businesses are overly cautious in expanding their investment due to high construction and borrowing costs.

11

Workforce and Consumer Market Size Arising from Immigration

The forecasted growth in population is 108,400 people from 2023 to 2028. The population aged 35 to 49 should increase by 33,900. That's three out of every ten new Calgarians in that age group. Most of the lift would come from interprovincial and international immigration. These individuals would expand the workforce and generate income to boost consumer spending and overall economic activity. If economic conditions elsewhere in Canada remain lower than in Calgary for longer, **there is an upside risk to the level of net migration to Calgary**. It would strengthen economic growth.

12

Real Disposable Income

The average annual rate of wage growth during the 2019 to 2022 service plans and budget cycle was 1.6 per cent. Higher wage growth would arise in the 2023 to 2026 cycle. Wage growth increases economic uncertainty. On the one hand, households' incomes would increase. On the other hand, the labour costs for businesses and governments would also increase. Wage pressure will soon weigh on labour contracts. **Avoiding an inflation wage spiral in the local economy will sustain positive economic growth for longer as real disposable income increases**.

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.

Oyin Shyllon
Manager, Corporate Economics & Regulatory Affairs
oyinola.shyllon@calgary.ca

Wendy Fan
Leader, Economic Analysis
wendy.fan@calgary.ca

Chukwudi Osuji
Senior Corporate Economist
chukwudi.osuji@calgary.ca

Clyde Pawluk
Senior Corporate Economist
clyde.pawluk@calgary.ca

Ivy Zhang
Senior Corporate Economist
ivy.zhang@calgary.ca

Paapa Essel
Corporate Economist
paapa.essel@calgary.ca

Gilbert Lybbert
Associate Economist
gilbert.lybbert@calgary.ca

Estella Scruggs
Corporate Research Analyst
estella.scruggs@calgary.ca

Ben Whyte
Senior Regulatory Analyst
ben.whyte@calgary.ca

Kenneth Wyllie
Senior Regulatory Analyst
kenneth.wyllie@calgary.ca

For media inquiry, please contact:

The Media Line at 403.828.2954 or media.relations@calgary.ca

For the technical questions, please contact:

Oyin Shyllon
Manager, Corporate Economist & Regulatory Affairs
oyinola.shyllon@calgary.ca

Wendy Fan
Leader, Economic Analysis
wendy.fan@calgary.ca

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.