Calgary

Fall 2022

Calgary and Region Economic Outlook

2022-2027

Executive Summary

The primary takeaway is better economic performance in Calgary and other Alberta communities in 2022 and 2023 as the Bank of Canada works to achieve a soft landing for the Canadian economy.

Executive Summary

1. Robust energy sector role within the context of the movement to cleaner energy to help drive local and regional growth

The primary takeaway is better economic performance in Calgary and other Alberta communities in 2022 and 2023 as the Bank of Canada works to achieve a soft landing for the Canadian economy. That's because the energy sector's importance to Alberta, particularly Calgary, remains.

In 2021, mineral fuel, including crude oil, was Canada's top exported good, with nearly one out of every four dollars of exports. Eighty-two per cent of Canadian crude oil production was from Alberta. Most Alberta producers have their headquarters in Calgary. So, crude oil production is a significant driver of local and regional economic growth. From 2021 through 2027, crude oil exports should continue to grow. However, the pace of export growth is expected to decelerate. That's because the production growth across Canada would fall below the pace of consumption growth within Canada. The additional units produced would make their way to export markets.

From 2022 to 2027, production and export growth would occur for the two forecast scenarios currently driving forecast expectations led by the work of the Canada Energy Regulator. The first ('current policies') scenario assumes limited action to reduce greenhouse gas emissions (GHGs) beyond present-day policies. The second ('evolving policies') scenario assumes less global demand for fossil fuels and increased use of low-carbon technologies. The difference between the scenarios is a faster compound annual production growth rate from 2021 to 2027 for the 'current policies' scenario (3.1 per cent) than the 'evolving policies' scenario (2.4 per cent).

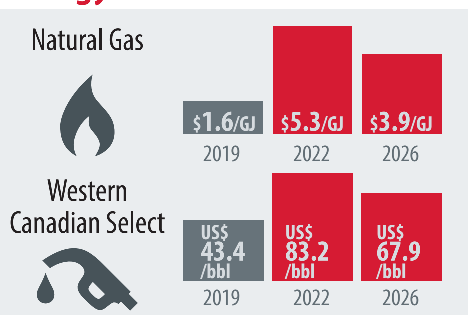
Given strong volume growth expectations, crude oil prices are the critical pathway from robust production and export activity to strong industry cashflows. Between 2011 and 2014, the average annual price for West Texas Intermediate (WTI) was above U.S.$95 per barrel. Between 2015 and 2017, it was below U.S.$53 per barrel. With more substantial volumes and higher prices in 2022, Canada is on track for a record export value in 2022 (surpassing $92.6 billion in 2014). For the forecast horizon, the average annual price is forecast to lie between the highs of 2011-2014 and the lows of 2015-17. For many years, crude transportation was the primary constraint keeping Western Canadian Select (WCS) at a substantial discount to WTI. It stimulated investment in additional pipeline capacity. The commencement of Enbridge Line 3 operations in late 2021 and the Trans Mountain pipeline becoming operational in 2023 Q3 should alleviate market access constraints.

The pipeline constraint for natural gas also persists. Due to transportation costs, Alberta natural gas prices have traded at a discount to Henry Hub (the U.S. benchmark). The primary Nova Gas Transmission Limited (NGTL) system delivers 75 per cent of natural gas exports from Alberta and British Columbia. NGTL bottlenecks have increased price volatility for AECO-C (the Alberta benchmark). The federal government approved two NGTL expansions in 2021 Q2 with a capacity of 1.45 billion cubic feet per day. The in-service dates are 2022 Q4 (the Edson Mainline expansion) and 2023 Q2 (the North Corridor expansion).

Given the current environment, the average natural gas price for 2023 to 2026 should be higher than during the 2019 to 2022 service plans and budget cycle. The benchmark Alberta natural gas price at the Alberta Energy Company (AECO) hub is forecast to average $5.30/GJ in 2022 before gradually declining to $4.00/GJ by 2027 as pipeline capacity expands. The pricing point AECO-C is a virtual point that has come to mean all gas traded along NGTL under the Nova Inventory Transfer service provisions. The price differential between AECO-C and Henry Hub is expected to ease as increased gas transmission capacity improves.

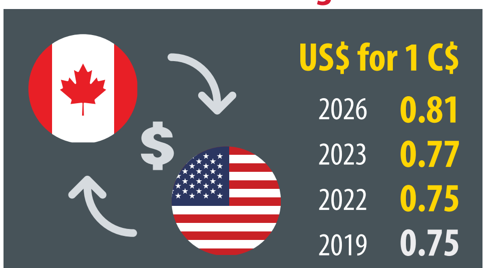
For the duration of the forecast period, the exchange rate is forecast to average US$0.79 per CAD$. Exchange rate stability would support trade, as trading partners benefit from increased price certainty. Typically, a weak Canadian dollar combined with a strong U.S. economy should boost economic activity in Canada as

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



After a period of significant fluctuation driven by global economic uncertainty, the **loonie** should return to relative stability with the U.S., as Canadian and U.S. monetary policies converge.

GDP Growth Comparison

In 2022, the **real GDP growth rate** for the regional economy would be behind the provincial economy but strong enough to stay ahead of the national, U.S. and world economies.

the U.S. is the largest trade partner and export market for Canadian goods. For the oil and gas industry, growth in crude oil and natural gas exports to U.S. markets between 2022 and 2027 is expected to occur. A stable dollar would translate into steady cashflows for businesses in and around the oil and gas industry and support a strong economy.

2. Stable housing investment as volume increase offsets price decline to support municipal residential tax base stability and business investment supports growth

Calgary's 2022 housing and business fixed investment (see glossary) level is at a record high. Both would have substantial contributions to GDP growth. Housing and business fixed investment is forecast to contribute close to half of GDP growth this year. The forecast calls for a decline in spending and investment by the three orders of government in 2023 and 2024 before a return to 2020 levels by 2025. It is attributable to the above trend spending by the federal, provincial and Calgary municipal governments in 2020 in response to the pandemic.

Between 2016 and 2021, through the federal census, only two Canadian provinces increased their stock of dwellings faster than Alberta – Prince Edward Island and British Columbia. For Alberta, the stock of dwellings increased from 1,527,678 to 1,633,220 units. Calgary should have a vital role to play in Alberta's future success. Calgary's housing starts were 12,700 in 2021 after a multi-year low of 7,900 in 2020 because of the pandemic. More recently, activity in Calgary has surged, with an anticipated all-time high of 14,500 housing units started in 2022. Subsequently, the forecast calls for housing starts to decline to an average of about 10,500 units per year for the 2023-2027 period.

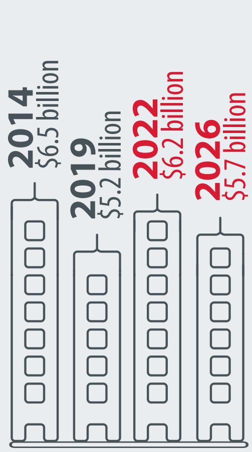
Business fixed investment should continue to grow in 2023 and 2024 primarily due to more robust oil and gas prices in 2021 and 2022, driving the capacity for new investment in plants and equipment. Business investment declined in 2016 and 2017 following the oil and gas industry slump and did not exceed pre-recession levels until 2021. For an extended period, from 2013 Q1 to 2017 Q4, the gradual buildup of 4.0 million square feet of additional office space supply in Calgary's downtown was accompanied by a sustained reduction in demand by 6.1 million square feet. It discouraged future investment. It should limit future investments in the downtown Calgary office market over the next decade to quality improvements or enhancements later in the forecast horizon.

The value of building permits is a valuable aggregate measure of investment intentions over the coming year or two. In 2021, the value of proposed building investments in the city of Calgary was $5.7 billion. Two of every three investment dollars in new buildings get directed at residential properties. For 2022, the forecast calls for an increase to $6.2 billion. It is consistent with the expected acceleration in housing starts. Subsequently, investment intentions would decline, with building permit values expected to average $5.5 billion between 2023 and 2027.

One crucial innovation accompanying the Fall 2022 Economic Outlook is the introduction of the pace of change for the benchmark home price. Unlike the average house price change, which averages across structure types – detached, semi-detached, row houses and apartments – and composition, the benchmark home price uses a consistent structure composition across structure types. In other words, it captures the price for detached, semi-detached, row house and apartment with specific features. In 2022, the benchmark home price is expected to surge by 10.8 per cent. In contrast, the average house price growth is lower at 3.7 per cent. The difference is because lower-priced multi-family units with minimum features will dominate sales in 2022. Price declines in 2023 would be due to homeownership restraint attributable to the sharp increases in interest rates. The overall wealth of residential property owners would stagnate between 2022 and 2023 due to additional units offsetting the price decline. Price growth should resume in 2024, expanding the residential tax base. The forecast is that average and benchmark price growth would converge by 2025.

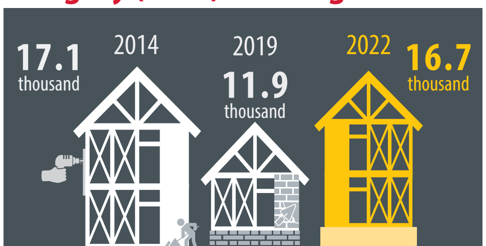
In 2022, financing costs for new investment projects have been the highest since 2008. At least six interest rate hikes in 2022 should take the prime lending rate from a 2021 average of 2.45 per cent to a 2022 average of 4.0 per cent. In the short term, the Bank of

Calgary Building Permits



The forecast for **building permits** in 2022 is $6.2 billion. It is the second highest level on record, only overshadowed by the high in 2014 when a few large downtown office towers were under construction.

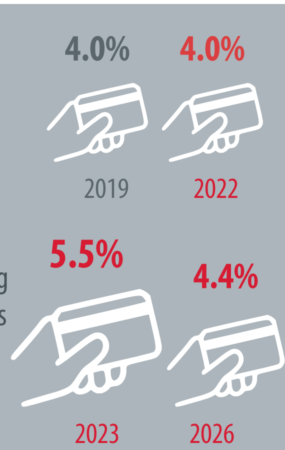
Calgary (CMA) Housing Starts



Housing starts in the Calgary Census Metropolitan Area (CMA) would be at the second highest level on record in 2022 before a moderate deceleration into 2023 and 2024 as affordability wanes.

Prime Business Loan Rate

The **prime business loan rate** increased aggressively in 2022. This ends a 14-year period of low borrowing costs. Consumers and businesses need to make adjustments.



Executive Summary

Canada should continue interest rate increases to combat high inflation, leading to a multi-year high prime lending rate of 5.5 per cent in 2023. The forecast is that the Bank of Canada will maintain increases into 2023 before a slight decrease in 2024.

3. Strong population growth and job growth would bring the unemployment rate lower to normal levels, drive business creation, and boost consumption

The April 1, 2022, estimate of Calgary's population was 1.344 million. The annual rate of population increase was about 22,200 people or 1.7 per cent, which is an acceleration from 1.1 per cent in 2021. The implication is that population growth has created the platform for at least a 1.7 per cent growth in personal consumption spending. Personal consumption spending is the main contributor to local GDP growth representing about three out of every five dollars of economic activity in Calgary. Therefore, personal consumption spending would be the most significant contributor to economic growth.

The growth in personal consumption spending should exceed population growth. Two forces are at work – more people and more income. First, sustained high levels of net migration of individuals in the 35 to 44 age group would increase the proportion of the population in the prime income-earning category. This age group continues to dominate population growth. For 2022, population growth due to net migration was 62 per cent (or 13,700 people). Natural increase, the difference between births and deaths, added about 8,600 people. The second is wage growth for the forecast period. However, Alberta's average annual rate of wage growth would lie below inflation leading to negative real wage growth.

Calgary's population is forecast to increase by 110,900 people between 2022 and 2027 (and by 88,000 between 2022 and 2026). The number of elementary and pre-elementary school-aged children (zero to nine years) in 2027 will be unchanged from 2022. It is a consequence of the structure of Calgary's population pyramid. The number of high school youth and graduates eligible for post-secondary education (aged 15 to 19) should increase.

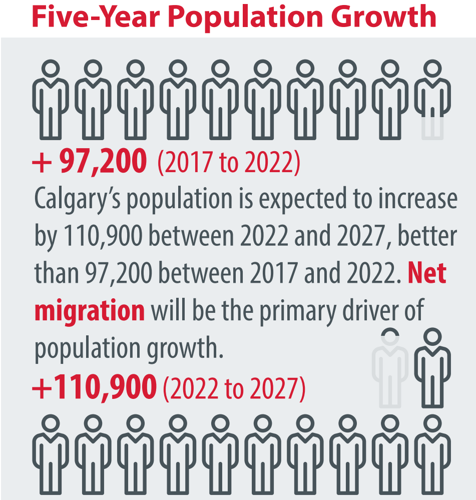
By 2027, the number of seniors aged 65 to 79 should increase by 31,100 relative to 2021. In other words, Calgary's population will age, putting upward pressure on the mean and median age through 2027. Also, by 2027, the population aged 40 to 49 is expected to increase by 37,800 people relative to 2021. The implication is that the share of the retiring population should begin to grow, putting downward pressure on the pace of economic growth.

The Calgary Economic Region (CER) labour force should increase to 986,600 people in 2022. That's a 4.1 per cent increase over 947,800 people in 2021. The forecast average growth rate for 2021 to 2027 is 1.8 per cent because Calgary's labour force participation rate would lead the country. The labour force should hit one million people sometime in 2023. The working-age population should increase at a faster rate. As a result, the labour force participation rate would decline from 70.5 per cent in 2022 to 69.5 per cent by 2027. It would follow the pattern observed for populations experiencing growth in the number of seniors.

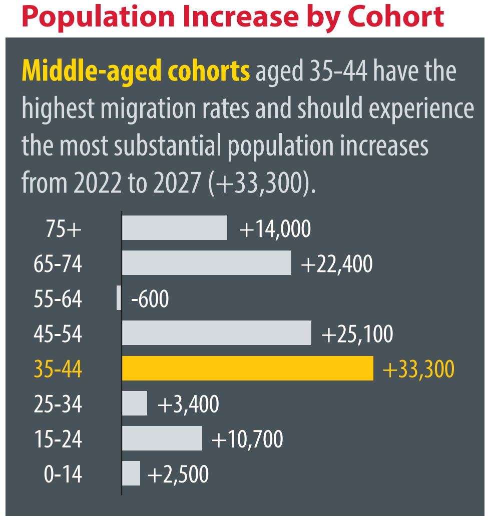
2022 is a banner year for job creation in the CER, with more than 900,000 jobs for the first time in CER history. It is coming off a record year for services-producing sector jobs in 2021. This is despite volatility in the services-producing sector with annual job losses in 2016, 2018 and 2020 alongside gains in 2017, 2019 and 2021. In 2021, the goods-producing sector was still 11 per cent below the 2014 record high. It would not recover these jobs over the forecast horizon. There is an even more substantial intensification of the shift to services-producing sector jobs in Calgary. For the forecast horizon, employment growth should average 2.1 per cent through 2027.

The unemployment rate is forecast to decline to 5.1 per cent at the end of the current service plans and budget cycle (2026). The reason for that is that the average growth rate of jobs should exceed the average growth rate of the labour force from 2021 through to 2027. As a result, the CER unemployment rate should return to levels more typical of Calgary. The last time the unemployment rate was that low was in 2014, before the sharp decline in oil prices.

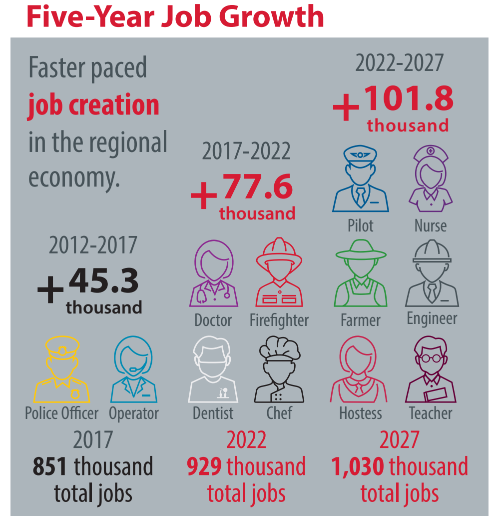
Five-Year Population Growth



Population Increase by Cohort



Five-Year Job Growth



4. Cost pressures are expected to persist and remain higher for consumers than for businesses and governments in 2022 before a switch heading into the next cycle

For Calgary consumers, the sharp rise in the cost of living in 2021 and the first half of 2022 would moderate in the second half of 2022 and into 2023. Specifically, after a 3.2 per cent increase in 2021, the expectation is a significant annual price change for consumer goods and services of 7.2 per cent. Four forces would contribute to the forecast path for the consumer price index for 2023 to 2026.

- Transportation costs would decrease as gasoline and diesel prices decline, microchip-related supply chain disruptions abate, and the cost of fuel-efficient transportation becomes even more affordable.
- Shelter costs of the homeownership variety should decline in 2023. The strength of the rental market would offset the decline. Positive inflation rates would be mostly attributable to increases in heating and mortgage costs.
- Food inflation would dominate in 2023 after taking a back seat to transportation from 2019 to 2022 Q3. A continuation of the Russia/Ukraine conflict will disrupt the supply of agricultural commodities, including fertilizer.
- A relatively stable but slightly stronger Canadian dollar relative to the U.S. dollar should keep prices for imported consumer goods and services ticking slightly higher.

In Alberta, increases in the cost of shelter and transportation have been two of the three most significant sources of inflation in 2022. The price of natural gas for home heating and traveller accommodation led shelter cost increases. For transportation, gasoline and vehicle parts were the most substantial drivers of price increases. As we move forward into the forecast horizon, significant cost pressures should come from food inflation. That's because cost-push inflation should begin to dominate demand-pull inflation.

For businesses, there would be significant upward pressure on labour costs as Alberta wage inflation increases from 1.4 per cent in 2022 to 3.4 per cent in 2023. Wage growth would accelerate further in 2024 as the labour market strengthens. After a massive surge of 32.4 per cent in 2021, producer and raw material price indexes are expected to moderate in 2022 (25.7 per cent) before turning negative in 2023. In short, the cost of doing business will drop in 2023 relative to 2022, in line with the decline in investment activity. As a result, Calgary's businesses will experience some medium-term relief in the pace of growth for operating costs.

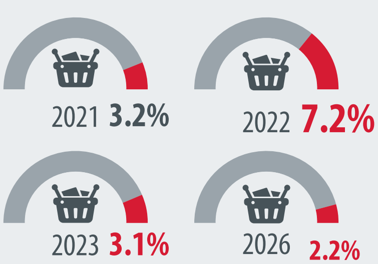
For the municipal government, population growth would drive additional operating cost pressures putting upward pressure on taxes. On the other hand, population growth would be a boon for businesses because of an expanded market for their goods and services and the ability to spread operating cost increases across more consumers.

The cost drivers for private sector capital investment and government investment are different. For the private sector, a useful aggregate measure is the non-residential building construction inflation. From 2021 through 2027, the total increase in non-residential building construction prices should fall slightly above the increase in consumer prices. Upward price pressure would come from increased world oil prices that increase transportation costs to get materials to construction sites. Also, supply-side constraints and the increased cost of material inputs would play a role.

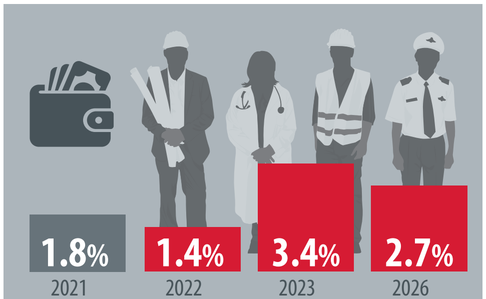
The operating and capital cost pressures on Calgary's municipal government would be lower than consumer inflation in 2022 before moving above it in 2023 and for the rest of the service plans and budget cycle because of increased demand from population growth, raw material price increases, wage pressures, and non-residential construction inflation. Maintaining infrastructure investment and providing frontline services that keep up with population growth will be a balancing act. Sustained provincial government capital funding transfers would ensure public sector investment keeps up with infrastructure needs that accompany higher private sector investments.

Calgary Consumer Inflation

The rate of increase in the **cost of living** would decline from a multi-decade high of 7.2 per cent in 2022 to 2.0 per cent by 2024. It should stay around the inflation target afterwards.



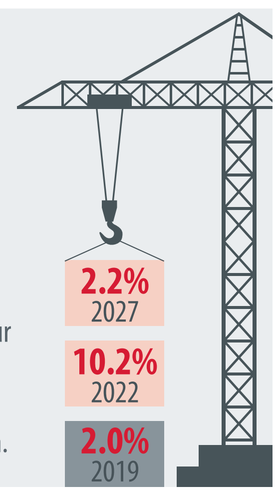
Alberta Wage Inflation



Wage pressure in Alberta would increase significantly. It would lead to a higher average pace of wage growth from 2022 to 2027 relative to 2017 to 2022.

Non-residential Price Inflation

The cost of **non-residential building construction** is projected to stay high over the forecast period as material and labour costs keep up with commodity and consumer inflation.



Executive Summary

Forecast Implications

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

Economic Indicator	Estimate Current Service Plans and Budget Cycle [2019 to 2022] Annual Average	Forecast Next Service Plans and Budget Cycle [2023 to 2026] Annual Average	Forecast Implications
Assumptions			
World			
Real Gross Domestic Product Growth (%)	2.2	3.1	Although the average growth rate of the world economy will be higher in the next service plans and budget cycle than the current one, economic uncertainty has increased. The increase is due to elevated inflation, aggressive interest rate hikes across countries, and geopolitical instability. These headwinds will weigh on consumer confidence and spending in Calgary.
The United States			
Real Gross Domestic Product Growth (%)	1.6	1.5	Demand for Canadian exports will reduce as U.S. economic growth slows down in the next cycle. Canada's energy exports, however, are expected to remain strong due to robust demand and increased transportation capacity.
Canada			
Real Gross Domestic Product Growth (%)	1.1	1.4	With the effects of the COVID-19 pandemic fading away and the energy prices higher, Canada's average economic growth rate will be higher in the next budget cycle, supporting interprovincial trade.
Prime Business Loan Rate (%)	3.3	4.8	Interest rates will stay higher in the next cycle due to rapid rate hikes to tackle inflationary pressures. This will curb investment incentives and household spending and increase The City's borrowing costs.
Exchange Rate (U.S.$ for 1C$)	0.76	0.79	A mild increase in the value of the Canadian dollar in the next cycle will help to limit increases in the cost of imported goods and services.
Alberta			
Real Gross Domestic Product Growth (%)	0.6	2.5	The City's next service plans and budget cycle will be supported by the solid growth in Alberta's economy, as the Province benefits from an improved fiscal situation driven by strong commodity prices.
Total Employment Growth (%)	1.2	2.0	Strong employment growth in Alberta indicates a tight labour market in the province. Employers in Calgary will have a more challenging time finding workers.
Unemployment Rate (%)	8.2	5.1	A lower unemployment rate in the next cycle leads to reduced demand for social assistance programs from The City as the number of unemployed people reduces.
Housing Starts ('000 units)	30.5	34.4	Strong residential investment will contribute to the economic growth within the province, as relative affordability and international migration keep demand robust in the next cycle.
Inflation Rate - CPI (%)	3.1	2.4	Despite persistent inflation in the current cycle due to pent-up demand and volatile energy markets, price pressures are expected to retreat in the next cycle with monetary policy tightening by the Bank of Canada. This will reduce pressure on City expenditures.
West Texas Intermediate - WTI (US$/bbl)	65.8	81.0	Oil prices will remain elevated in the next cycle compared to the current cycle. 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 (US$/bbl)	52.3	68.6	Expanded access to markets and higher refining costs for Alberta heavy crude would sustain a lower price difference between WCS and WTI for the next cycle.
Alberta Natural Gas Price - AECO/NIT ($/GJ)	3.1	4.1	Higher average natural gas prices for the next cycle will increase operational costs for businesses and the 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 (%)	6.3	-0.3	Price growth for finished products will be lower in the next cycle as inflation and production costs subside after 2022, reducing the inflationary pressures for The City.
Raw Materials Price Index (%)	11.9	-1.7	Raw material prices are expected to decline after 2022 and into the next cycle, which will moderate cost pressures for businesses.
Alberta Average Annual Wage Rate Growth (%)	0.9	3.1	Higher wage growth in the next cycle will raise incomes as well as the cost of labour, contributing to inflationary pressure within the province and The City.

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

Economic Indicator	Estimate Current Service Plans and Budget Cycle [2019 to 2022] Annual Average	Forecast Next Service Plans and Budget Cycle [2023 to 2026] Annual Average	Forecast Implications
Forecast			
Calgary Economic Region			
Real Gross Domestic Product Growth (%)	1.1	2.7	While the pandemic-driven recession has created significant economic challenges in the current cycle, stable growth is expected for the region in the coming cycle, supporting recovery in the non-residential tax base.
Total Employment ('000 people)	876.2	977.3	Job growth will bring an increased consumer base and demand for housing in the region.
Total Employment Growth (%)	2.1	2.1	The job growth rate will remain strong in the next cycle, following the elimination of the COVID-19 impact on the labour market.
Unemployment Rate (%)	8.5	5.5	A falling unemployment rate in the next cycle will increase the competition for skilled workers and reduce the 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)	13.2	13.1	Housing investments in the Calgary area are expected to remain stable in the next cycle as growth in Calgary's neighbouring municipalities stays strong. Calgary faces competition from surrounding areas in attracting housing demand and investments.
Inflation Rate - CPI (%)	3.2	2.4	Following the high inflation of 2021 to 2022, increases in consumer prices will moderate in the next cycle. More stability in the cost of goods and services helps limit the risks of cost overruns and budget adjustments. Moderation of inflation will help Calgarians mitigate the pressures from the rising cost of living.
Non-Residential Building Price Inflation (%)	4.2	1.9	Non-residential construction costs are expected to increase in the next cycle at a slower rate. Recent increases in fuel prices have not yet been passed on to construction projects due to contract delays.
City of Calgary			
Demography			
Total Population ('000 people)	1,314.2	1,399.1	A larger total population means the demand for municipal services would be higher. It also means that the residential property tax base would increase.
Total Population Growth (%)	1.5	1.6	Calgary's population continues to grow steadily, from both natural increase and net migration. When the pandemic finally ends, The City may have to play catch-up to provide services to meet the expectations of the larger population.
Net Migration ('000 people)	10.4	13.5	Following disruptions due to the COVID-19 pandemic in the current service plans and budget cycle, net migration to Calgary is expected to pick up in the upcoming cycle, supporting demand for housing.
Household Formation ('000 units)	7.0	8.6	The higher household formation in the next cycle supports higher demand for residential spaces. It supports a larger residential tax base and increased demand for City infrastructure and services.
Real Estate			
Residential Market			
Housing Starts ('000 units)	11.4	10.5	Slightly lower but stable residential construction activity in the next 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 (%)	1.8	1.8	Home affordability in Calgary will remain challenging for new housing market entrants in the upcoming cycle as price growth remains strong. It will, however, increase the supply of new housing units and reduce the pressure on property tax growth for existing homeowners.
Total Building Permits ($billions)	5.1	5.5	Stable growth in residential and non-residential construction, increases in the price of real estate, and higher building permit values in the next 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:

Downside pressure on the global GDP, global commodity market supply shortfall, and the differences in the pace of central bank rate hikes for Canada and the U.S.

1

Global GDP Outlook

Adverse movements in four risk factors put **downward pressure on the global GDP outlook**. The risk factors include the War in Ukraine, the monetary tightening from central banks, the fiscal withdrawal from the governments in most advanced economies (excluding the U.K.), and the slower growth in China due to its continuous COVID-19 lockdowns. Because most of these risk factors remain and a couple have intensified, there is further downside risk, especially for 2022 and 2023.

2

Global Commodity Supply

One of the most brutal conflicts in Europe since the second world war emerged in 2022. The Russia/Ukraine war has disrupted global commodity markets, especially agricultural and energy commodities. The longer the conflict lasts, the greater the duration of the **global commodity market supply shortfall with upside risks for Calgary and Canada.** The longer the conflict lasts, the greater the pressure on the global marketplace to look beyond these countries for supply.

3

The pace of Interest Rate Hikes

The policy direction of global central banks is consistent. However, **variations in the speed of monetary tightening across global central banks create uncertainty**. The consensus is that the central banks acted too late to address inflation, and the need to catch up has led to some divergence. More substantial U.S. Federal Reserve (the U.S. central bank) rate hikes than the Bank of Canada weakens the loonie. The reverse would strengthen the loonie and reduce the cost of imports, which is significant for Calgary.

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

Downside pressure on residential housing investment, different environmental policy preferences, and the rotation from durable goods to services.

4

Housing Investments

The significant 2022 interest rate increases to combat high inflation in Canada have put significant **downward pressure on residential housing investment** activity. Because the prime lending rate that drives variable mortgages is now at the highest level since 2008, affordability has worsened. Housing markets in Vancouver and Toronto would fare worse. It is motivating new policies to tax house-flippers and non-resident-owned vacant homes.

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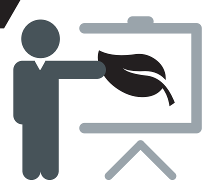

Environmental Policy Divergence

There is a risk of heightened tensions between federal and provincial governments on environmental policy and the pace of policy implementation. **Environmental policy divergence between municipal, provincial, and federal governments creates business uncertainty**. Higher gasoline prices have been a key factor in higher inflation, drawing attention to higher federal carbon taxes. Government finances have strengthened, but the future of environmental policy across governments is ambiguous.

6

Increased Demand for Services over Goods

Canada is experiencing a rotation out of durable goods spending and toward spending on services. It is driven by pent-up demand for services as a result of the pandemic. As the demand for recreation, entertainment and travel increases into 2023, there are tailwinds for the Canadian economy. It creates **upside potential for the Canadian economy**. Economic activity in Canada's large cities, including Calgary, would benefit from the boost.

Risks from potential changes in Alberta provincial government policies:

The uncertainty associated with the ability to overcome labour shortages, increased capacity for energy sector exports, and the level of capital funding for Alberta municipalities

7

Oil and Natural Gas Exports

Crude oil prices have pulled back from the peak in the first half of 2022. The June 2022 average price for WTI was around $110 per barrel compared with below $85 per barrel in September 2022. The Trans Mountain pipeline will become operational in 2023, and the expansion of the NGTL system for natural gas due for completion in 2023 provides **upside potential for energy exports**. It creates the scope for expanded energy sector profitability without significant volume shifts simply because of the lower price discount for energy commodities. The improved fortunes of the sector bode well for other Calgary industries.

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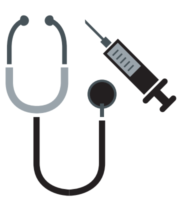

Labour Shortages

Job creation has accelerated in 2022, with a significant 9.4 per cent year-over-year rate by September 2022. At the same time, the job vacancy rate has also started to accelerate. There is uncertainty about Alberta's capacity to attract the skillsets needed to fill emerging vacancies. It **may require government policy responses to ensure that the workforce needed to drive economic growth is available to employers**.

9

Infrastructure Spending

Investment by the three levels of government in Calgary is expected to decline because a **decrease in capital spending dollars through the provincial government creates downside risks**. The stimulative effect from a COVID-19-related stimulus program would run its course. Also, the Government of Alberta's local government fiscal framework with substantially lower levels of infrastructure investments would kick in. The silver lining is continued investment in the Green Line.

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

Private (Non-residential) Investment

Although fast-paced economic growth has returned to Calgary, many Calgary businesses are not investing in expansions as they did previously. Proposed investments have caution underlying them, as reflected in non-residential investment intentions. In the near-term, non-residential investment intentions would remain lower than the $2.2 billion high recorded for building permits in 2017 through 2027. **There are downside risks if the level of business investment caution persists**.

11

Immigration Boost

The forecasted growth in population is 110,900 people from 2022 to 2027. The population aged 35 to 49 should increase by 48,400. That's four out of every nine new Calgarians in that age group. Most of the lift would come from inter-provincial and international immigration. These individuals would expand the workforce and generate income to boost consumer spending and the overall level of 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

Wage Pressures

The average annual rate of wage growth during the 2019 to 2022 service plans and budget cycle was 0.9 per cent. Higher wage growth would arise in the next budget cycle. **Wage growth increases economic uncertainty**–households' incomes would increase, but the cost of labour for businesses and governments would raise costs. Wage pressure will soon weigh on contracts. The ability to avoid an inflation wage spiral will sustain positive economic growth for longer.

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, Canada Mortgage and Housing Corporation (CMHC), Conference Board of Canada, Canadian Real Estate Association (CREA), Calgary Real Estate Board (CREB), Government of Alberta, Government of Canada, International Monetary Fund (IMF), Statistics Canada, Stokes Economics, The City of Calgary, U.S. Energy Information Administration (EIA), Federal Reserve Bank of St. Louis (FRED), World Health Organization (WHO), and others.