



Executive Summary

Calgary and Region Economic Outlook

2019 – 2024

Spring 2019



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Executive Summary



1. More proceeds from the sale of energy products to support local and regional growth

Energy products and exports are vital to the local, regional, provincial and national economy. Many Canadian energy companies have their headquarters in Calgary. Energy exports from Alberta were more than a third of the provincial Gross Domestic Product (GDP) in 2018. Excluding Alberta's energy trade, the 2018 Canadian merchandise trade balance (exports minus imports) was -\$134.0 billion at the end of the year. Alberta's energy trade had a positive balance of \$82.3 billion, closing the national trade balance to -\$57.7 billion.

A further boost to the trade balance requires higher prices for Western Canadian Select (WCS) crude. For the forecast period, gradual WCS price growth is expected to lift and sustain economic growth. All sectors of the CER should benefit from the improvement in energy product prices and improved sector cash flows. Additional private sector capital spending and job growth should support economic expansion, albeit to a level below full capacity.

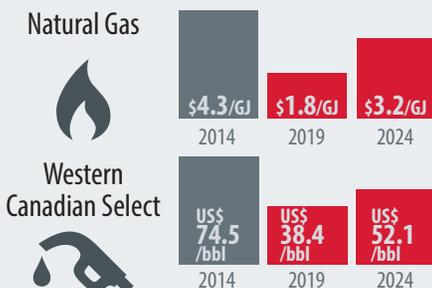
Faster price growth for WCS is expected to lead to a narrowing of the price differential with West Texas Intermediate (WTI) over the forecast period. More U.S. shale production commensurate with WTI price increases would continue to act as a drag on the price of WTI. It would also put an upper limit on WCS prices unless new markets open for WCS crude. WCS prices are expected to rise steadily from US\$38/barrel in 2019 to US\$52/barrel by 2024.

Low natural gas prices are expected to persist for most of the forecast period. The benchmark Alberta natural gas price at the AECO hub is expected to average \$1.75/GJ in 2019 and \$2.15/GJ 2020. The 2018 average was \$1.52/GJ. The price differential between AECO-C and Henry Hub is forecasted to widen in 2019 and 2020 unless the transportation capacity in Alberta improves. Resolution of some of the transportation carrying capacity by 2024 would get prices to \$3.2/GJ.

Alberta's previous New Democratic Party (NDP) government mandated a crude oil production curtailment for 2019. The reduction would lower the rate of regional and provincial GDP growth. Both economies are expected to decelerate to growth below 2.0 per cent. Subsequently, the GDP growth rate should improve as the average annual WCS price growth returns to about the 2018 rate for the rest of the forecast horizon. The in-coming United Conservative Party (UCP) government could alter the strategy. The new government's energy strategy is a key risk element for the spring outlook with either upside or downside implications.

Differences in Central Bank overnight lending rates and the price of crude oil could contribute to changes in the Canada/ U.S. exchange rate. The forecast is for the Bank of Canada and the U.S. Federal Reserve to maintain current overnight lending rates throughout 2019. The price of crude oil is more volatile than most other traded goods that represent a significant part of Canadian merchandise trade. The expectation is for slightly higher WTI and WCS oil prices. Consequently, the forecast calls for only a mild appreciation of the Canadian dollar in a range between US\$0.76 and US\$0.79 per CAD\$.

Energy Prices



The Western Canadian Select **oil price** is expected to rise from US\$38/barrel in 2019 to US\$52/barrel. Natural gas prices will also rise lifting the local economy.

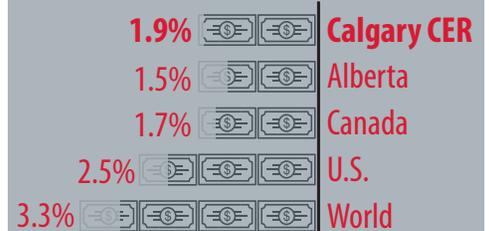
Canada/US Exchange Rate



Downward pressure on the **loonie** due to an expected slower pace of interest rate increases relative to the U.S. will be more than offset by upward pressure from favourable trade activity for Canadian exporters.

GDP Growth Comparison

In 2019, the **real GDP growth rate** for the regional economy will be above the national and provincial economies but behind the U.S. and world economy.





2. An uplift from regional infrastructure, commercial, retail and tourism/ recreational investment

There are now more than half a million dwellings in Calgary. Beginning in 1986, the historical average annual rate of housing starts relative to the existing housing stock is between 0.9 and 3.6 per cent every year. In 2018, there were 8,866 housing starts in the city of Calgary. The 1.8 per cent result is at the lower end of the traditional pace (median and mean are 2.2 per cent). The forecast for housing starts is an average of about 9,000 units per year for the 2019 to 2024 period. There is ample supply of residential housing stock that is available for sale but unsold. The share of multi-family housing starts relative to total housing starts should increase because the stricter mortgage lending stress test would divert interest away from single-family units.

The total residential building investment in the city of Calgary is expected to average between \$2.5 and \$2.6 billion over the forecast horizon. The entire building construction investment in the city of Calgary is estimated to average about \$4.8 billion between 2019 and 2024. The residential investment would exceed non-residential investment. The total value of building permits in the city of Calgary was \$4.4 billion in 2018, which is the average expected throughout the forecast horizon.

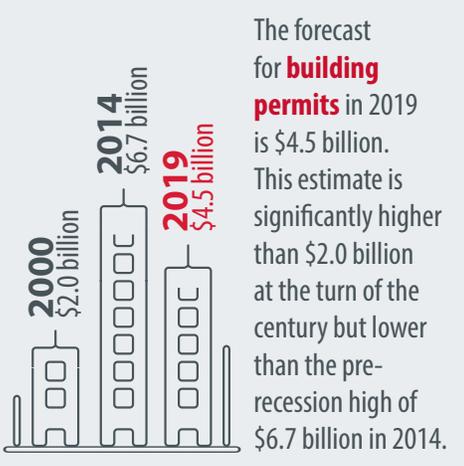
Residential investment would exceed non-residential partly because new construction of office space is not expected in downtown Calgary. The addition of millions of square feet of office space to downtown Calgary over the last decade is so much that the increase exceeded the

total stock of office space in downtown Winnipeg. Because of less favourable conditions for the oil and gas industry, the addition of office space is unaccompanied by demand and has put downward pressure on prices and reduced the prospect of new office investment going forward. It has also lowered property assessment values in the downtown from 2015 to 2019 leading to a \$257.6 million shift in the tax responsibility from non-residential properties in downtown Calgary to non-residential properties outside the downtown. In addition, Calgary City Council decided to transfer some responsibility to all residential properties.

Major projects (\$5 million or more) that are underway in 2019 for the CER should cost \$14.3 billion to complete (15 April 2019 update). Another \$19.9 billion in significant investments is expected to commence later in 2019 or by no later than 2021. The total investment is \$34.2 billion. The CER should be home to more than half of Alberta investments in four categories – commercial property, retail property, residential property, and tourism or recreational investments. Projects in these four categories are expected to generate \$8.9 billion in investment, less than \$11.6 billion for infrastructure investments in the CER. More than 50 per cent of proposed significant infrastructure investments in Alberta is expected to occur in the CER. It reflects a medium-term shift to above trend infrastructure investments in the CER.

Financing costs for new investments projects are at the highest level in a decade. It is due to the Bank of Canada (BoC) raising the overnight rate on three occasions in 2018. The forecast is for the BoC to maintain the overnight rate throughout 2019. Consequently, the prime business loan rate should remain at 4.0 per cent for 2019.

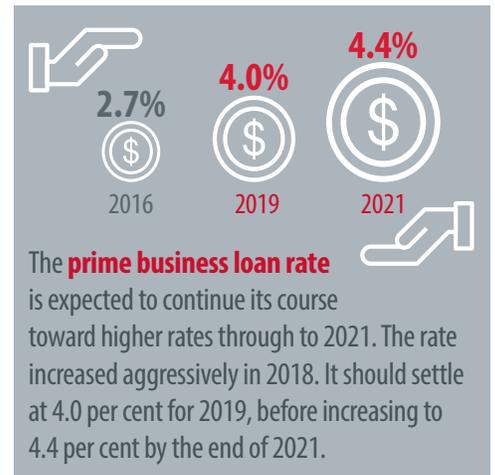
Calgary Building Permits



Tax Shift Out of Downtown



Prime Business Loan Rate





3. Inflow of workers to lift labour supply, increase population and expand the production base

Forecasts of higher WCS crude oil prices and levels of investment ordinarily attract job seekers from elsewhere. Because the Alberta unemployment rate is expected to be high relative to the rest of Canada, international net migration is expected to be the leading source of additions to the regional workforce.

Over the 2019 to 2022 period, total net migration to Alberta is projected to be 172,800 persons. It is an increase over the 2015 to 2018 period when net migration totalled 113,800 persons. It is a decrease relative to the 254,500 persons between 2011 and 2014. This midpoint level of net migration relative to the previous eight years reflects the projected state of the economy relative to that period.

Between 2016 and 2018, Calgary experienced an average unemployment rate of 8.4 per cent. The average annual level of net migration to the city of Calgary was 2,000 persons per year. Over the period, net international migration was positive and significant (an average of +14,000 persons per year). It helped to offset the considerable loss from interprovincial and intercity net migration (an average of -12,000 persons per year). Forecast period interprovincial and intercity migration would improve relative to 2016 to 2018 levels.

The city of Calgary's population is expected to increase to 1.399 million by 2023 with the addition of an estimated 131,400 persons between 2018 and 2023 or 26,300

annually. Net migration should account for most (61 per cent) of the increase. Natural increase would account for the rest. Annual net migration is expected to average 16,000 persons with natural increase responsible for the balance of 10,300 persons.

Local and regional population growth rates for the 2019 to 2022 period would be similar. The expectation is compound average annual growth rates of 2.0 and 1.9 per cent respectively. Population growth should be slower in the rest of the province at 1.6 per cent. The city of Calgary is expected to remain a more attractive destination for migrants relative to other Alberta jurisdictions.

The expectation, by the end of the forecast period, is a shift in the population age structure for Calgary. Calgary's population is expected to increase by +131,400 persons. A third of the increase is forecasted to occur in the 35-39 age group (+21,500) and the 40-44 age group (+23,300). These working-age cohorts correspond with those groups that have high migration rates. Whenever the share of the population that is working and saving increases, there is a boost to economic prosperity. The population shift is expected to have labour supply implications. A growing share of workers in the economy relative to the total population would lead to more production and greater resource availability.

Total employment in the CER is expected to grow by an annual rate of 1.6 per cent in 2019. The regional economy is expected to add 108,500 jobs over the six years from 2018 to 2023. As a result, the unemployment rate is expected to fall to 5.9 per cent in 2024.

Calgary Population Growth



Calgary's population is expected to increase by 131,400 in five years. **Net migration** will be the primary driver of population growth with a large share of migrants to Alberta choosing Calgary.



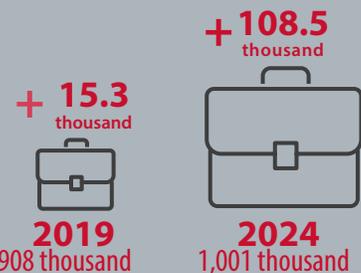
Population Increase by Cohort

Middle-aged cohorts aged 35-39 (+21,500) and 40-44 (+23,300) have the highest migration rates and should experience the most substantial population increases.



Regional (CER) Employment

Sustained **job creation** in the regional economy should occur with 108,500 jobs expected in five years starting with 15,300 jobs in 2019, which will help to lower the unemployment rate to 6.0 per cent by 2023.





4. The cost of living and doing business and greater demand for services to lift municipal operating costs

Increases in the cost of living in Calgary, measured by the consumer price index, are expected to be moderate going forward. After a 2.4 per cent increase in 2018, modest annual price changes for consumer goods consistently below 2.0 per cent should materialize for the rest of the forecast period. Spending on transportation, shelter and food dominate consumer inflation. Four forces are expected to contribute to the forecast path for the consumer price index.

- Transportation costs would increase because oil prices are expected to maintain or exceed current levels during the forecast period.
- Shelter costs should be stable because lower housing and rental costs would offset expected increases to heating costs.
- A relatively stable Canadian dollar relative to the U.S. dollar should keep prices for imported consumer goods and services steady.
- Only minor adjustments to the Bank of Canada's overnight rate would occur for most of the forecast period because the national economy is expected to operate below its potential level of activity.

Inflationary pressure would be mainly attributable to transportation costs. Using information from 2018, the contribution of transportation costs to annual consumer price inflation was between +1.0 and +1.3 per cent.

There would be upward pressure on labour costs as wage inflation above 2.0 per cent is expected throughout the

forecast period for Alberta. The cost of doing business in 2019 should fall because the producer price index and the raw material price index are both expected to decline. For 2020 and beyond, the industrial product price index and raw material price index should outpace consumer inflation putting cost pressure on businesses.

Four economic forces should keep the non-residential building price inflation rate around the rate of consumer price inflation. Two of the forces would put upward pressure on prices. Higher oil prices should increase transportation costs to get materials to construction sites. Higher domestic interest rates should raise borrowing costs as construction firms look to increase prices to maintain profit margins. Two alternative forces would put downward pressure on prices. A low and relatively stable exchange rate should make material imports cheaper. The high local unemployment rate should moderate CER labour costs.

Alignment between non-residential construction inflation and consumer inflation would help to hold the line on the cost of delivering capital infrastructure projects. Nevertheless, the need to accommodate population growth would intensify the demand for capital investment dollars.

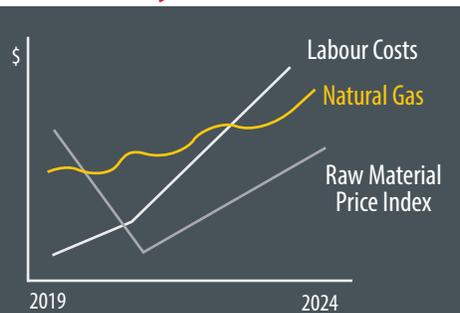
The operating cost pressure on Calgary's municipal government would be higher than consumer inflation because of the cost of population growth, raw material price increases, and a higher product price index. It is because the municipal government needs to maintain infrastructure and provide frontline services that keep up with population growth. In 2019, the costs of some of these goods and services would go up and others down.

Calgary Inflation

The rate of increase in the **cost of living** declined from a high of 3.0 per cent in 2014 to 1.0 per cent in 2016. It should increase by 1.8 per cent in 2019 and then drop to 1.5 per cent by 2024.

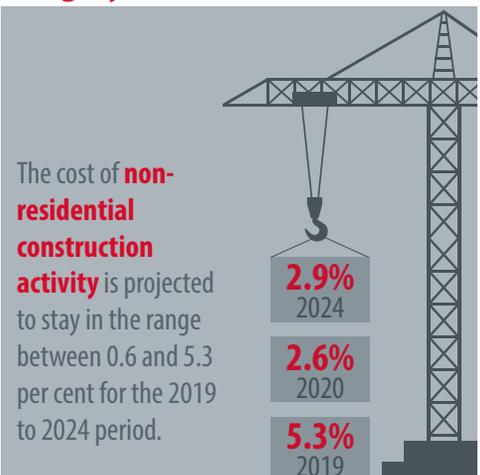


Commodity Prices



Commodity prices are expected to be higher further along the forecast horizon. **Cost of City operations** would be higher.

Calgary Construction Inflation



The cost of **non-residential construction activity** is projected to stay in the range between 0.6 and 5.3 per cent for the 2019 to 2024 period.

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Forecast Averages: Previous (2015 to 2018) vis-à-vis Current (2019 to 2022) Budget Cycle

Variable	Previous City of Calgary Budget Cycle [2015 to 2018] Average	Current City of Calgary Budget Cycle [2019 to 2022] Average	Forecast Implications
Assumptions			
World			
Real Gross Domestic Product Growth (%)	3.5	3.3	A larger economic and population base would increase the demand for commodities and place upward pressure on commodity prices. It will have a positive impact on Canadian terms of trade as Canada produces several commodities.
The United States			
Real Gross Domestic Product Growth (%)	2.4	1.9	Deceleration in demand growth for Canadian exports in line with a deceleration in growth for Canada's most significant trading partner.
Canada			
Real Gross Domestic Product Growth (%)	1.8	1.8	The average rate of economic growth in Canada would remain unchanged.
Prime Business Loan Rate (%)	3.0	4.3	Higher borrowing costs for The City's suppliers would increase The City's purchase costs, and should also affect variable rate mortgages for Calgarians.
Exchange Rate (US\$ for 1C\$)	0.8	0.8	Exchange rate stability would keep the price of imported goods stable limiting the need to hedge.
Alberta			
Real Gross Domestic Product Growth (%)	-0.1	2.0	The Alberta economy would leave the recession behind and move into a phase of economic expansion growing steadily.
Total Employment Growth (%)	0.7	1.4	The pace of job growth would improve as the expansion in gross domestic product takes hold.
Unemployment Rate (%)	7.1	6.3	The unemployment rate would improve as the economy recovers.
Housing Starts ('000 Units)	29.4	27.9	Inventory build-up would ease the pace of housing starts to the pace of household formation.
CPI-Inflation Rate (%)	1.6	2.0	Inflation rate would increase as the economy expands.
West Texas Intermediate - WTI (US\$/bbl)	52.0	61.5	Better price stability but moderately higher crude oil prices would increase prices for petroleum-based commodities, transportation costs and inflation.
Western Canadian Select - WCS (US\$/bbl)	35.4	45.0	WCS Oil price would increase as oil price curtailment puts a hold on supply and transportation constraints ease gradually despite limited pipeline capacity.
Alberta Natural Gas Price - AECO/NIT (\$/GJ)	2.1	2.2	The impact on The City of Calgary would be mixed. Slightly higher prices will put upward pressure on operating costs and at the same time put upward pressure on franchise fee revenue.
Industrial Product Price Index (%)	1.5	1.4	Price growth for finished products would be similar to the previous next budget cycle.
Raw Materials Price Index (%)	-1.1	-1.5	Raw material prices would remain weak in this new phase of increased protectionism.
Alberta Average Wage Rate Increase for All Industries (%)	-2.3	2.6	Job growth would lower the unemployment rate. Competition for talent should emerge and lead to moderate rates of wage inflation.



Forecast Averages: Previous (2015 to 2018) vis-à-vis Current (2019 to 2022) Budget Cycle

Variable	Previous City of Calgary Budget Cycle [2015 to 2018] Average	Current City of Calgary Budget Cycle [2019 to 2022] Average	Forecast Implications
Forecast			
Calgary Economic Region			
Real Gross Domestic Product Growth (%)	0.3	1.9	The pace of growth in the regional economy would be similar to the Alberta and national economies.
Total Employment ('000 persons)	878.5	935.4	Job growth would increase demand and prices for non-residential space lifting The City's property tax base.
Total Employment Growth (%)	1.0	1.9	Non-residential construction activity would intensify, especially for infrastructure, as proposed 2019-2020 investments commence.
Unemployment Rate (%)	7.9	7.1	A lower unemployment rate would increase the competition for skilled workers and increase cost pressure on The City.
Calgary Census Metropolitan Area (CMA)			
CPI-Inflation Rate (%)	1.5	1.6	The local inflation rate would keep increases in the cost of living to below the 2 per cent threshold.
Non-Residential Building Price Inflation (%)	-0.1	2.4	The rate of escalation for construction costs would be much higher for the current cycle.
City of Calgary			
<i>Demography</i>			
Total Population ('000 Persons) at the end of the cycle	1,244.8	1,331.5	Demand for municipal services would be higher, and the residential property tax base should increase.
Total Population Growth (%)	1.5	2.0	The pace of population growth would be faster than the previous cycle as the local economy enters an expansion phase.
Net Migration ('000 Persons)	7.8	16.1	Positive net migration would exceed natural increase as the primary source of population growth. Most migrants would come from international sources.
Household Formation ('000 Units)	8.4	10.0	The rate of household formation would increase with a faster average pace of population growth.
<i>Real Estate</i>			
<i>Residential Market</i>			
Housing Starts ('000 units)	9.0	8.8	The City's revenues from residential building permits would be slightly lower; assuming all things are equal.
Building Permits (\$billion) (city)	-0.3	1.9	Household wealth would grow at a faster pace.
Average Residential MLS Sale Price (% change)	5.0	4.3	City revenues from building permits would be lower. Revenue from non-residential activity should decrease substantially relative to the past cycle.
<i>Non-Residential Market</i>			
Downtown Office Vacancy Rate (%)	18.2	20.2	The downtown office vacancy rate would remain close to the average for the previous cycle.

Numbers may not add up due to rounding.



Forecast Risks

Risks arising from activities in the Rest of World:

Worsening global outlook, outstanding trade tensions, and an unratified trade agreement

- 1 There are three significant external risks – lower world GDP growth, an uncertain outcome for U.S. and China trade negotiations, and Brexit. Should materially relevant surprises turn up for these risk factors, they will get transmitted to Calgary through consumer price inflation and demand for exported goods.
- 2 Trade tensions led to a deceleration in global goods trade for 2018. Any additional movement toward protectionism, reduction in consumer and business confidence in the EU and growth deceleration in China would adversely impact small open economies like Calgary and Canada.
- 3 The leaders of the U.S., Canada and Mexico signed the United States-Mexico-Canada Agreement (USMCA) in 2018. For ratification, it needs the approval of each country's legislature. Delays or requests for additional amendments would create trade uncertainty with two significant trading partners for Canada.

Risks arising from factors that balance needs across Canada:

Policy-led pressures on housing investment, a relatively strong loonie, and job market impact of baby boomer exits

- 4 The federal mortgage stress test has diverted interest away from single-family to multi-family units. Any increases to the interest rate because of the Bank of Canada's efforts to prevent overheating could dampen the ability of households to invest in housing with implications for housing starts.
- 5 Demand for Alberta crude is relatively inelastic due to limited market access. A stronger loonie creates an incentive to cut prices and maintain sales that will reduce profit margins and deter investment. A weaker loonie encourages investment with more profits and spurs growth.
- 6 Job growth is expected to exceed labour force growth because of the exit of baby boomers from the workplace. The forecast assumes no changes to labour productivity, which may or may not materialize because of the knowledge and skills gap created.

Risks from potential changes in Alberta provincial government policies:

The possible shift in strategy for Alberta crude, carbon levy uncertainty, and revisiting the Alberta minimum wage

- 7 Alberta oil production outpaces crude oil pipeline capacity by a large margin. Alberta's previous NDP government mandated a crude oil production curtailment for 2019. It curbed the rapid decline in WCS prices. The in-coming UCP government could alter the strategy for the oil and gas industry.
- 8 The in-coming Alberta UCP government plans to eliminate the provincial carbon levy. The federal government has indicated a federal carbon levy backstop. Redirection of resources from provincial coffers to federal coffers would alter the distribution of economic activity and GDP.
- 9 The in-coming Alberta UCP government plans to roll back the minimum wage increases introduced by the previous Alberta NDP government. It added costs to restaurants retail and housekeeping services. The forecast does not incorporate any changes to the Alberta minimum wage.

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

Downtown office investment, a unidirectional revision to investment intentions, and transition to services-producing jobs

- 10 The forecast assumes no new supply of office space in downtown Calgary through to 2024. It also does not reflect any conversions of existing office space into other uses that would require additional investment dollars. Changes of use would alter investment and local economic activity.
- 11 Non-residential investment drives local economic activity and encourages residential investment. The forecast uses investment intentions communicated to Alberta Economic Development and Trade. Changes in the value of investments are expected to offset themselves. Substantial changes in any direction would alter forecast results.
- 12 The concentration of job opportunities in the services-producing sector has implications for labour market volatility as goods-producing sector job seekers move out and services-producing sector job-seekers move in. Potential short-term skills shortages from this transition will affect the local economy.

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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Sources:

Statistics Canada, CMHC, CREA, CREB, Bank of Canada, Conference Board of Canada, GLJ Energy Publications, The City of Calgary, Stokes Economics, U.S. Federal Reserve Bank of St. Louis (FRED), U.S. Energy Information Administration (EIA), International Money Fund (World Economy Outlook), and others.