

Calgary



Calgary Economic Region Labour Market Outlook

2024-2033

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Executive Summary

This first edition report provides a 10-year assessment of the expected “gap” or potential imbalance between the labour demand and supply within the Calgary Economic Region (CER). This report also assesses what is responsible for the changes in the demand and supply of jobs, i.e., whether increased economic demand (expansion) or retirements/deaths (replacements) drives job demand. The report also examines whether school leavers and job holders from other geographic locations, industries, or occupations can generate enough supply to meet the increase in demand.

Significant numbers of job vacancies in 2022 started easing in 2023

Calgary’s labour market tightened significantly in 2021 and 2022 as post-pandemic demand for goods and services increased demand for workers, creating labour scarcity. Job vacancies saw a significant spike, reaching a record high in 2022. The unemployment rate also continuously declined during this period, reaching lows not seen since 2015.

The sudden surge in demand and rising vacancies led the Government of Canada to set higher immigration targets to boost labour supply. Combined with the Bank of Canada’s tightening monetary policy, this has started to cool down the labour market. The most robust evidence that the labour market is beginning to ease is that job vacancy rates within the CER have fallen for the fourth consecutive quarter. This decrease in the job vacancy rate reflects a fall in vacant job count and a slowdown in employment growth.

Shortages for some occupations should ease through to 2026 before re-emerging

The number of job seekers is expected to exceed the number of job openings between 2023 and 2026 as net migration reaches record highs. Approximately 178,000 job openings are expected within the current budget cycle (2023-2026), outpaced by 188,000 job seekers. The large number of job seekers is expected to reduce job vacancies that started accumulating in 2022.

The next budget cycle (2027-2030) will see a slightly different trend. The combination of economic expansion as interest rates fall and a slowdown in the population growth rate will lead to a surge in job openings and a slowdown in job seekers. Without compensating policy actions, some job shortages are expected to re-emerge in key occupations between 2027 and 2030.

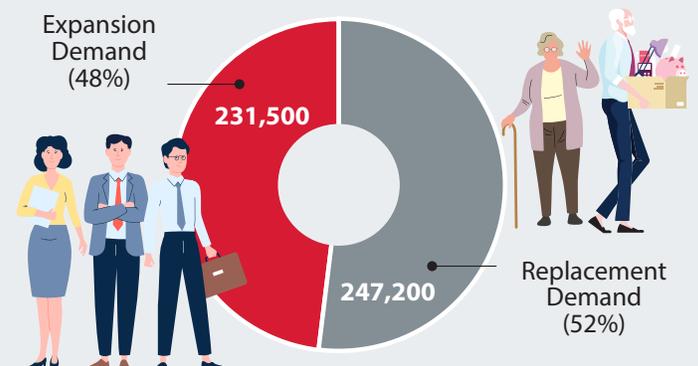
The Calgary Region is expected to offer 479,000 positions to job seekers over the next 10 years

Labour demand will be driven not only by economic expansion but by retirement replacement, as an aging population and early retirement post-COVID result in workers permanently leaving the labour force. It is estimated that one in every six Calgarians will be at least 65 years or older by 2030. Without government action, the aging population and baby boomer retirements are expected to increase demand for replacement. Between 2023 and 2033, the CER will see approximately 247,000 retiring workers and workers moving out of the economic region. This represents 52 per cent of total job openings that need to be filled. The remaining 232,000 jobs are expected because of increased demand and economic growth.

On the supply side, job seekers will mostly be international immigrants and young people entering the workforce. After a halt in immigration during the pandemic years, net migration has picked up. The federal government, in 2022, put in place a new immigration plan to grow the labour supply to address potential labour shortages. Immigration in 2022 was at a record high across Canada, and with this policy in place with higher targets in each successive year until 2025, it is expected to boost immigration. International immigrants and young people entering the labour force are expected to account for over 75 per cent of the total additions to the labour force throughout the forecast period.

CER Job Openings Breakdown, 2023-2033

Between 2023 and 2033, the CER will see approximately 247,000 retiring workers and workers moving out of the economic region. The remaining 232,000 jobs are expected because of increased demand and economic growth.



The Occupations that are expected to win and lose the search for talent over the next 10 years

Shortages are expected in four industries, namely Construction, Retail Trade, Education, and Accommodation / Food Services Industry. The occupation categories most significantly affected are:



General and technical construction trades



Elementary and Secondary School Teacher Assistants



Retail salespersons and wholesale trade sales account representatives.



Cooks, Butchers, Bakers, and Food Support Occupations.



University professors and Post-Secondary Assistants

Surpluses are expected for the following occupations:



Auditors, accountants, and investment professionals



Helpers and labourers (warehouse workers and material handlers)



Insurance, real estate, and financial sales occupations



Elementary and kindergarten schoolteachers



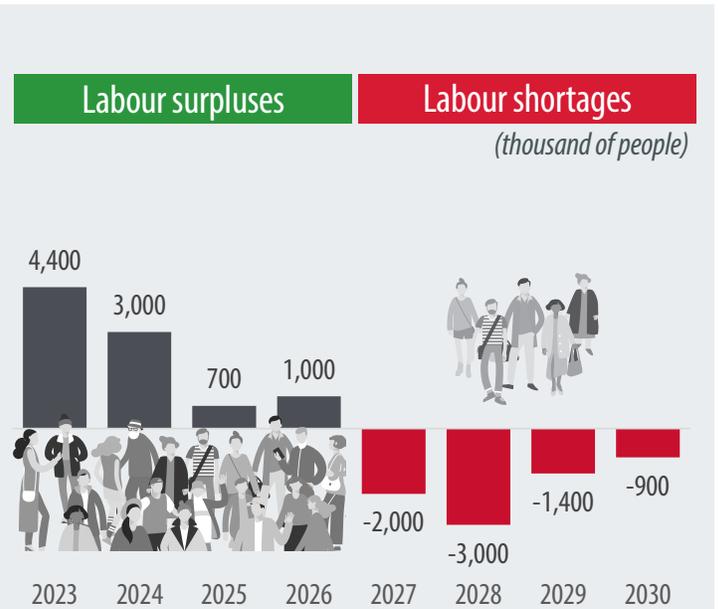
Retail and wholesale trade managers

Recommended Policy Actions to Address Upcoming Hiring Challenges

The CER Labour Market Outlook supports the government and the public in policy and decision-making. Policy changes can help address the future labour market imbalances identified in the report. Some notable ones that future updates of the outlook will assess success in handling include:

- Policy Action 1: Immigration support and advocacy** are essential in addressing some of the projected hiring challenges. However, it is vital to attract people with the skills where shortages abound.
- Policy Action 2: Support for easing regulation and licensing requirements** in particular professions that makes sense will effectively address shortages while reducing underemployment among foreign-trained workers.
- Policy Action 3: Introducing mobility incentives** can help attract surplus labour from other provinces to occupations experiencing shortages.
- Policy Action 4: Increased municipal government advocacy for provincial government investment** in education and training programs for occupations with acute shortages can help ease projected labour shortages.
- Policy Action 5: Increasing job market participation by underrepresented groups**, especially encouraging youth and women's participation in the labour force, can help mitigate the decreasing trend and address some occupational shortages.

Labour Shortages and Surpluses



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



Calgary Economic Region (CER) Labour Market Outlook

1. Introduction to the Labour Market Outlook

What is the Calgary Economic Region (CER) Labour Market Outlook?

The CER Labour Market Outlook is a multi-year forecast for the labour market conditions in the regional economy. The report estimates future supply and demand by industry, occupation, and education. The outlook provides a long-term assessment of potential labour market imbalances in CER. The federal government of Canada and several provinces develop and distribute

labour market outlooks on a regular basis. This report is the first economic-regional-level labour market outlook that we know of in Canada and the first to provide detailed labour market projections¹.

¹ This report reflects the labour market outlook with projections at 4-digit National Occupational Classification levels. The National Occupational Classification (NOC) 4-digit refers to the Minor Group of the classification, representing the domain in which an occupation is carried out (occupational domain). It aggregates several unit groups and thus represents the four-digit code used by the NOC. There are 162 minor groups in NOC 2021 Version 1.0.

What is the purpose of the CER Labour Market Outlook?

This report aims to provide information on the employment prospects across different occupations and to support decision-making in education and training, relocation, and policy design. It will help local governments and businesses within the CER take the necessary steps to attract people with skills in high demand. The outlook will inform new entrants to the labour force across the CER and provide guidance to graduating students and transitioning workers to understand better which skills are in high demand. It will also help employers and policymakers assess the potential risks of labour shortages/surpluses and skills mismatches.

From a training perspective, it will help colleges, universities, and other post-secondary institutions within the CER plan adjustments based on the demand for skills. Adjusting curriculums and expanding training programs can be implemented based on projected shortages or surpluses in key occupations. For example, the Government of Alberta recently highlighted potential future needs within the construction, energy, and aviation sectors. As a result, the 2023 provincial budget made significant commitments to address these labour shortage challenges in vital economic sectors, with additional support (\$111 million) for post-secondary enrolment expansion in construction, energy, technology, business, and aviation sectors.

From the standpoint of employers, it will provide an understanding of potential hiring challenges they will face and the potential impact on their business performance. For exam-

ple, based on local projections, the 2023 provincial budget extended the Alberta at Work initiative, a program designed to prepare for the future labour market. The province also aims to expand workforce planning to areas with the most shortages, such as new funding of \$95 million to address healthcare shortages. This report should help the local government gain awareness on which occupations are likely to require policy interventions to support and enhance the balance between future demand and supply.

What is the forecasting methodology of the CER Labour Market?

The CER Labour Market outlook forecasting model generates 10-year projections of labour demand and supply, covering 162 occupations and 56 industries for the CER. The forecasting system is composed of three sets of regional models: a macroeconomic model, an industry employment model and an occupational model. The industry employment model forecasts occupation employment, while the occupational model determines occupation demand and supply, as measured by the labour force, and the components of labour force change (i.e., school leavers and net migration). Each of these separate models takes its inputs from a macroeconomic model as well as other assumptions associated with the model and variables. Refer to Appendix 1 for a more detailed breakdown of the methodology used in generating the results of this report.

How to use the CER Labour Market Outlook?

The City of Calgary Corporate Economics team provides the labour market outlook for the CER to support both the government and the public in policy and decision-making.

Compared to the occupational outlooks developed for the federal and provincial governments, the projections at the regional economy level may have fewer members for certain occupations. While the projections for employment and labour force for these occupations may still provide useful information on indicating trends, the results should be treated with caution, especially for occupation groups with less than 100 people.

It is also important to emphasize that the information provided in this report is affected by many factors that change over time. As a result, users of this report should consider multiple sources of information in addition to the results of this report when making labour market decisions.



2. CER Labour Market Outlook Main Findings

2.1 10-Year Overview and Key Trends

Over the next 10 years, job openings are expected to grow by approximately 479,000 in the CER. The growth in job openings is primarily driven by increased demand due to expansion and replacement. Job openings arise due to the need to replace retiring employees or workers who passed away, and the need

out of an expanding or growing economy. Job openings that arise from the need to replace workers are referred to as “replacement” demand. Job openings that arise from increased demand due to a growing economy are referred to as “expansion” demand. Within the 10-year period, 492,000 job seekers are expected to be added to the labour force in CER through net in-migration, young people starting work, and job market re-entrants.

TABLE 1: CER OUTLOOK HIGHLIGHTS, 2023-2033

	2023E	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F
Total Job Openings	46,400	45,900	45,500	40,700	46,000	46,300	43,700	43,700	42,500	40,000	38,100
Replacement Demand	19,500	20,400	21,000	21,600	22,100	22,600	23,000	23,500	24,000	24,500	25,000
Expansion Demand	26,800	25,500	24,400	19,100	23,900	23,700	20,700	20,200	18,500	15,500	13,100
Total Job Seekers	50,800	48,900	46,200	41,700	44,000	43,300	42,300	42,800	44,400	45,100	42,300
Cumulative Imbalance*	24,400	21,300	20,600	19,600	21,700	24,700	26,100	27,100	25,200	20,100	15,800

*A positive value indicates a potential shortage of workers and a negative number indicates a potential surplus of workers

Note: 2023 data are estimates only. Data of 2024 to 2033 are forecasts.

Key Trends of Hiring Challenges

Hiring challenges are expected to ease within the current budget cycle (2023-2026). Labour market tightness has been challenging within the region due to Calgary’s aging population and a declining trend in total fertility rates. It is estimated that one in every six Calgarians will be at least 65 years old by 2030. The proportion of seniors (65 years and older) is expected to rise to 15.5 per cent by 2028, compared to 13.3 per cent in 2023.

In addition, job vacancies rose significantly in 2022 as the post-pandemic era saw employers struggle to find workers to meet increased job market demand. Calgary’s job vacancy rates rose from 2.5 per cent in Q4 2020 to 4.5 per cent in Q4 2022. The combination of a shifting demographic and the struggle to meet consumer demand translated into significant labour market tightness in 2022.

On a positive note, for employers, the number of job seekers is expected to exceed the number of job openings within the current budget cycle. This surplus in labour will be driven by the federal government’s plan to attract 985,000 workers (and their families) between 2024 and 2025 and Calgary’s relative housing affordability². This is expected to fill existing job openings, reducing the cumulative imbalance (shortage) issues.

The next budget cycle (2027-2030) will see a slightly different trend. The combination of economic expansion as interest rates moderate and a slowdown in population growth will lead to a surge in job openings and a slowdown in job seekers. As a result, some cumulative imbalance (labour shortage) challenges are expected to persist in key occupations within the next budget cycle.

² Despite these plans, there are concerns regarding the crunch on housing and other services. This raises a possibility of the federal government levelling out immigration numbers.

Sources of Job Openings

Economic growth is expected to drive job openings within the current budget cycle. However, replacing aging workers will be the primary driver of job openings in the long term. The labour market projections forecast 479,000 job openings in the CER between 2023 and 2033. Of this number, 247,000 jobs, representing 52 per cent, are due to the need to replace retiring workers who have passed away and workers leaving the region. The remainder of job openings, representing 232,000, are due to economic expansion and the need for more workers to support increased demand.

Expansion demand is expected to be at its highest in 2023 and 2024 despite the tightening monetary policy impacting business costs. The surge in expansion demand in 2024 is attributable to the rise in record-high population growth currently being experienced, driving consumer demand in key industries. For context, approximately 51,000 people moved to Alberta in the first quarter of 2023, the second-highest number the province has ever recorded. This is expected to drive demand for goods and services, resulting in the need for more labour to meet this demand. About 21,000 job openings are expected to be added annually between 2023 and 2033. Job openings due to expansion are expected to fall over the forecast period as population growth slows, dipping slightly in 2026 as annual net in-migration returns to normal levels.

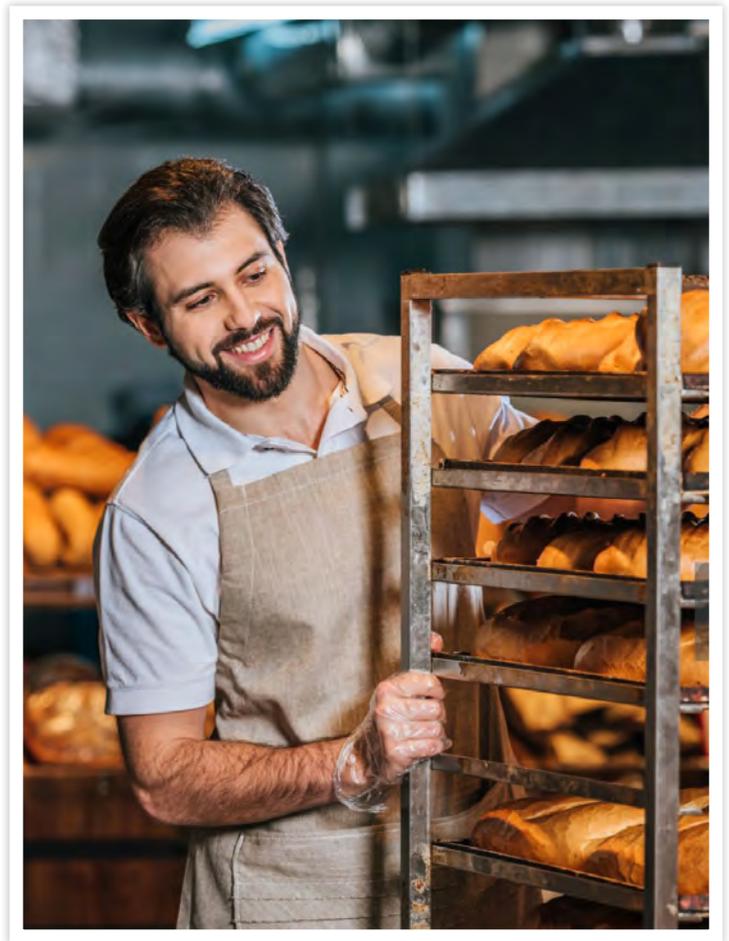
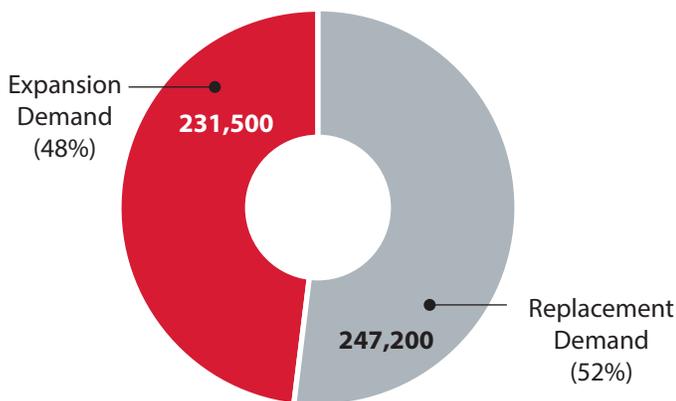


Figure 1: CER Job Openings Breakdown, 2023-2033



Out of 247,000 job openings expected due to replacement³, 208,000 (representing 43 per cent of total job openings) are due to the need to replace retiring workers. The workforce in the CER is expected to age, raising the retirement rate significantly over the coming years. The number of replacement job openings due to retirement is expected to grow year-over-year, ranging from 16,000 in 2023 to 21,000 in 2033.

Overall, expansion demand will represent a larger source of job opening growth within the current budget cycle. However, replacement demand from retirement will be the primary driver of job openings beyond 2026. By 2031, retirement replacements will account for a larger share of total job openings at 56 per cent or 24,000, while expansion demand will account for 44 per cent or 19,000 job openings.

³ The modelling of replacement demand here assumes lost workers will be replaced on a 1:1 basis.

Sources of Job Seekers

In-migration is expected to be the biggest source of additional labour between 2023 and 2024. However, school leavers are expected to be the biggest source of job seekers in the long term. The CER will require a proportional increase in job seekers over the next decade to fill out these job openings to avoid shortages in key sectors. 492,000 job seekers are expected to enter the labour force within the next 10 years, with approximately 40 per cent of job seekers expected within the current budget cycle (2023-2026).

Figures 2 and 3 show the projected number of job seekers between 2023 and 2033 and the sources of this growth. Young people entering the job market for the first time or school leavers are expected to be the largest source of workers. Approximately 226,000 school leavers, representing 46 per cent of total projected job seekers, are expected to fill projected job openings. Unlike international migration, the annual increase in school leavers is expected to remain stable over the forecast period, averaging 21,000 annually.

The second largest source of job seekers is international migration. Approximately 156,000 international immigrants are expected over the next 10 years, with nearly half expected to arrive within the current budget cycle. While the number of

school leavers is expected to grow annually over the next 10 years, the number of international immigrants added annually will decline over the forecast window.

The third most significant source of workers is interregional migration. On average, the region is expected to attract 6,000 job seekers from other Canadian regions annually. Out of the 69,000 job seekers from different regions over the next decade, 41,000 or 60 per cent are expected within

Figure 2: CER Job Seekers Breakdown, 2023-2033

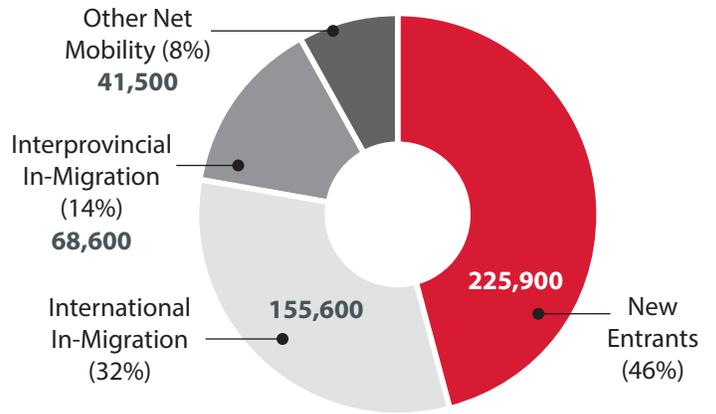
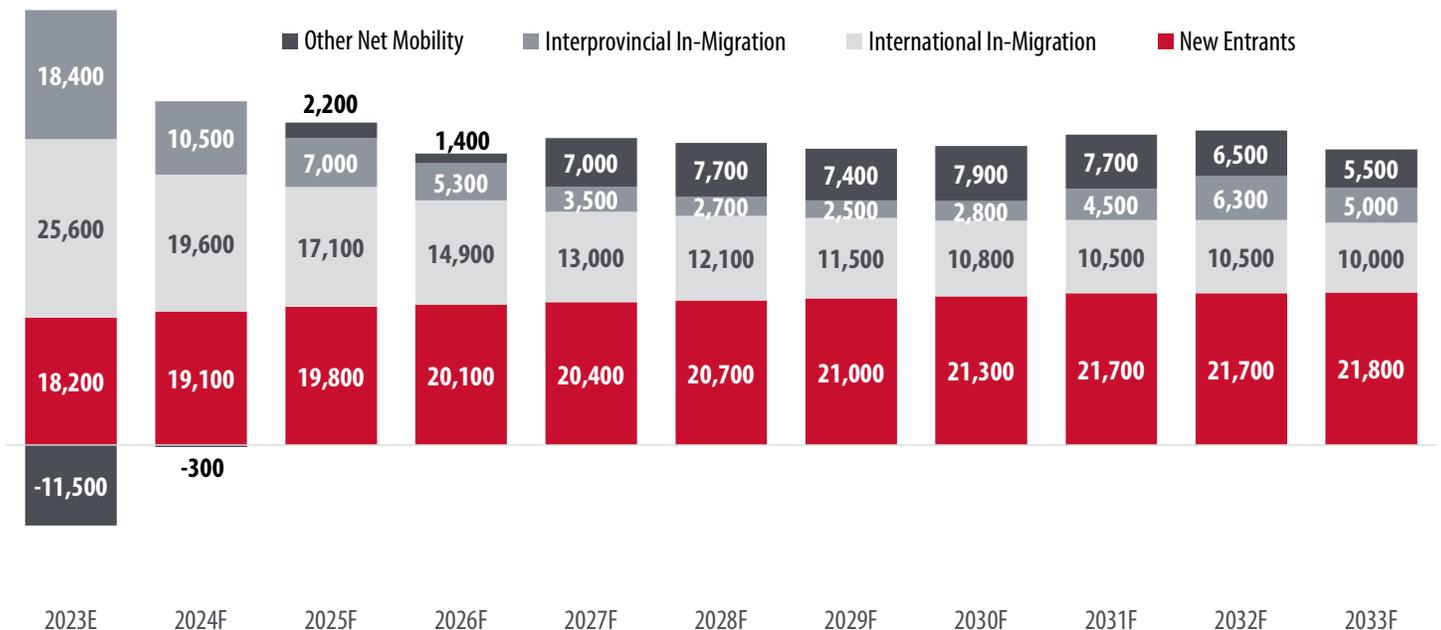


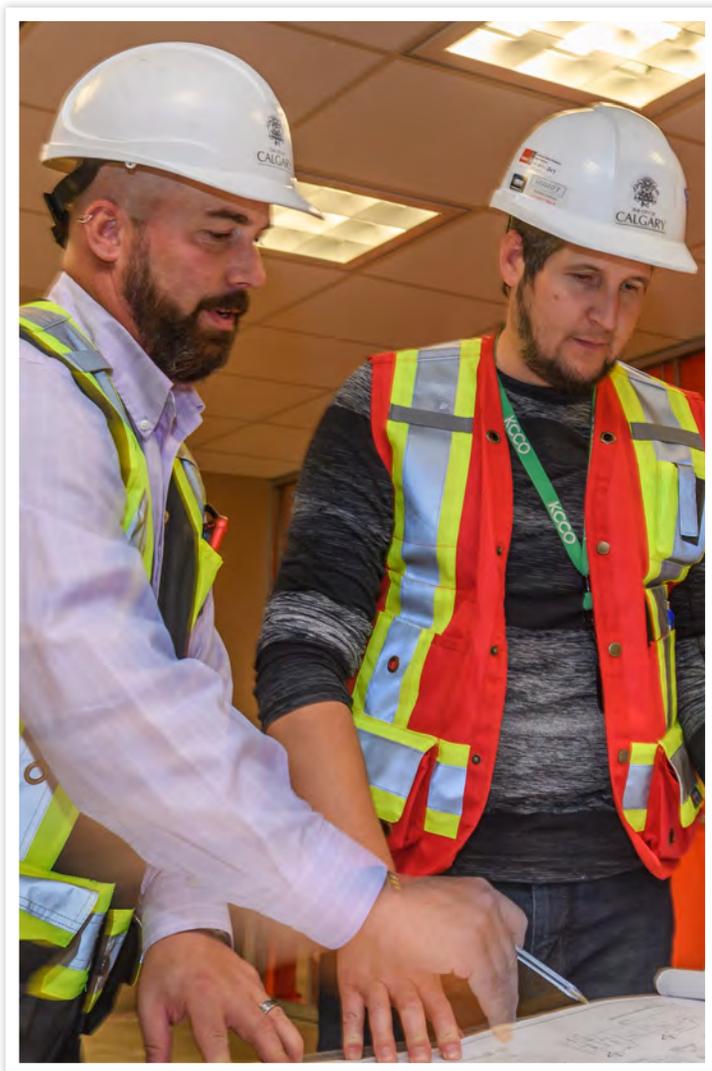
Figure 3: CER Annual Job Seekers By Source, 2023-2033



the current budget cycle. Housing affordability and a robust job market, particularly in the current high-interest rate environment, are expected to attract new homebuyers and job seekers.

Other net mobility includes re-entrants to the labour force, occupational mobility of people moving from one occupation to another, and other job entrants.

To conclude this section, new migration (particularly international migration) is expected to drive the number of job seekers over the next two years. However, new entrants are expected to be the biggest source of job seekers for the rest of the decade, offsetting the drop in in-migration over the long term.



2.2 CER Industry Outlook

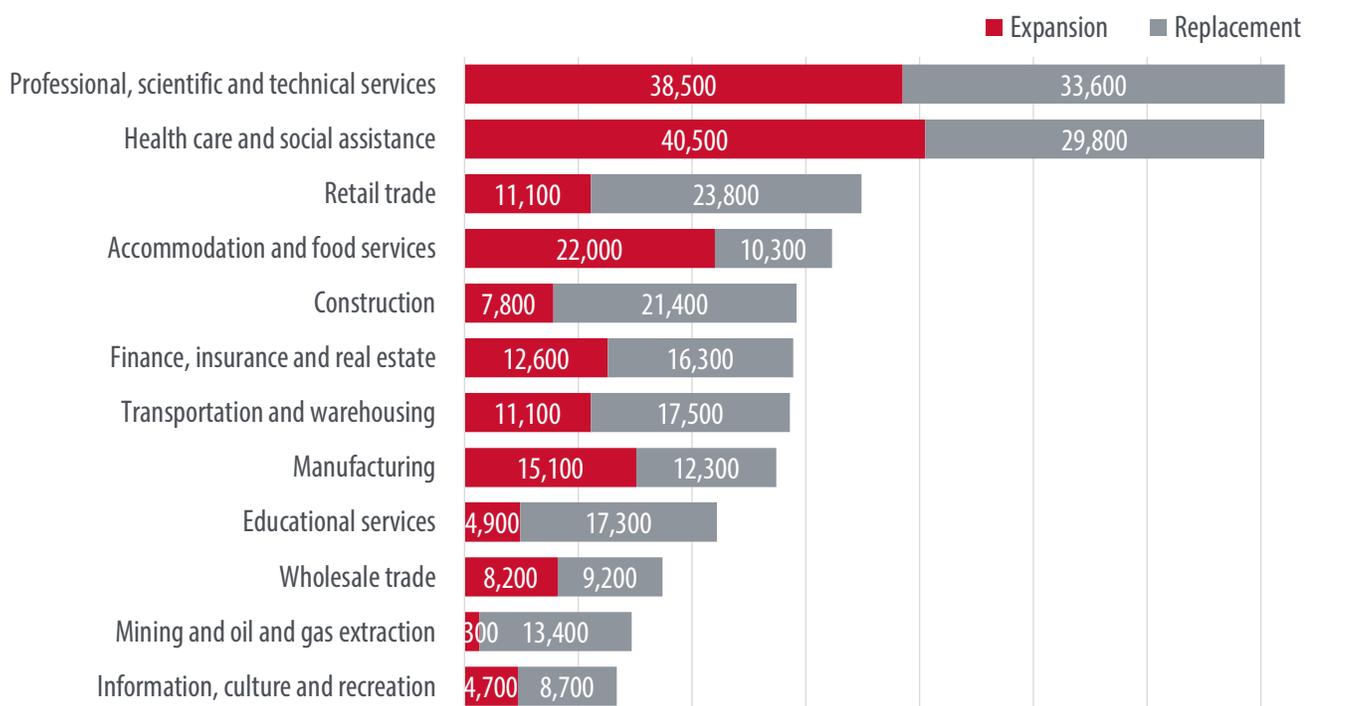
In Calgary, five industries are expected to account for half of total job openings over the next ten years:



Over the next ten years, the professional, scientific, and technical services (PSTS) and health care and social assistance industries are expected to account for the most job openings. More than half of the total job openings within the health and social assistance industry will be due to the expansion of the health sector, as Calgary's aging population, rapid population growth and health outbreak risks are expected to lead to healthcare and home care expansion.

Calgary's construction industry is currently facing shortages, delaying projects while raising price fluctuation risks. While job vacancies have declined for three consecutive quarters as of Q2 2023, job vacancies remain elevated. Construction jobs are still a primary contributing factor to the elevated job vacancies within the region. Record high net migration and relative affordability have increased demand for housing

Figure 4: CER Total Job Openings By Industry, 2023-2033



construction. On the other hand, an aging workforce and a drop in construction trade enrolments have contributed to the slow growth in the supply of construction workers. As a result, close to three out of four job openings within the construction industry will result from the need to replace workers over the forecast period.

Overall, job openings within the health care and PSTS industries are expected to rise mainly due to economic expansion. On the other hand, job openings within the Retail Trade and Construction industries will be driven by the need to replace aging workers, as well as workers lost to other industries.

2.3 CER Occupational Outlook

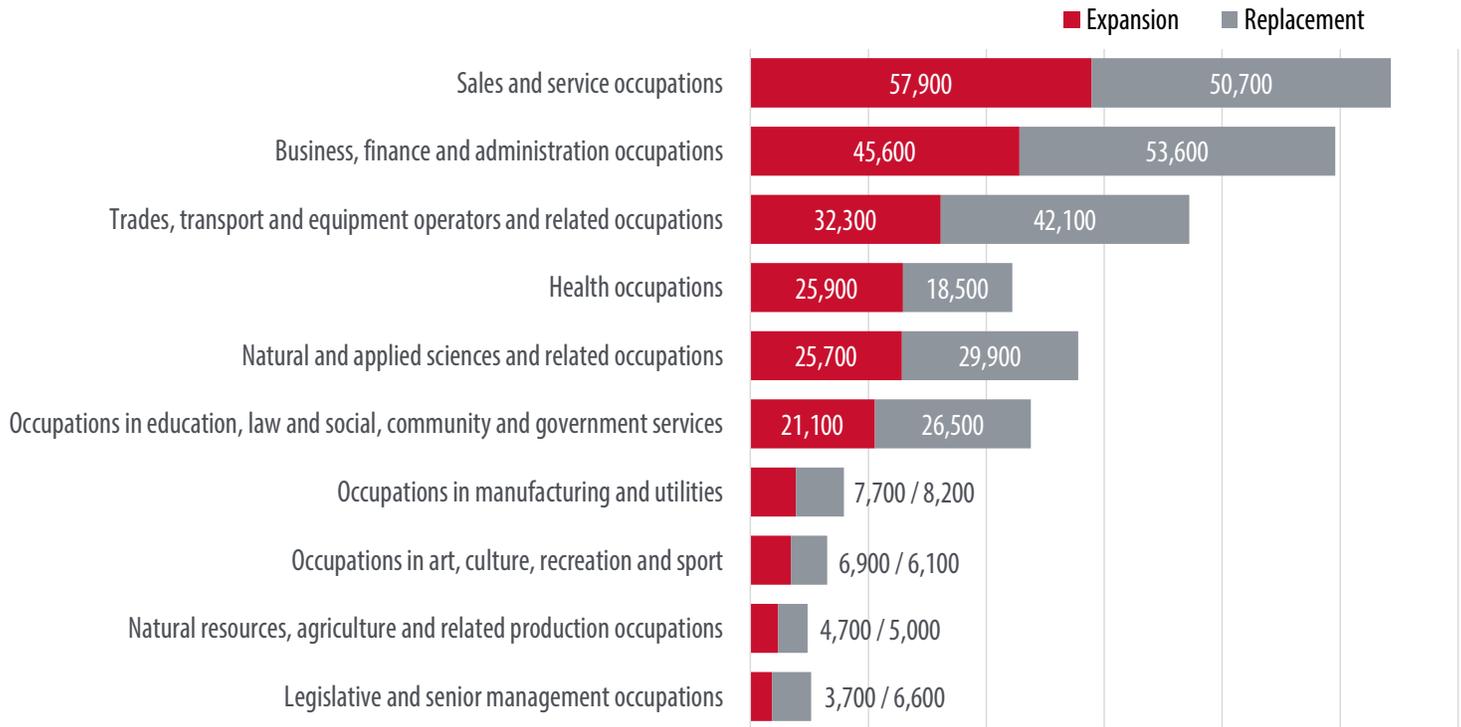
The CER labour market is expected to ease between 2023 and 2026 before tightening within the next budget cycle.

Cumulative imbalance shortages are expected to decline within the current budget cycle, as robust net migration and the economic slowdown contribute to the drop in excess job openings. Population growth is expected to be strong between now and 2026, increasing the number of job seekers and trimming down surplus job openings.

As the current budget cycle ends and the 2027-2030 budget cycle comes into effect, the surplus of job seekers is expected to dissipate as population growth slows. In addition, the projected moderation in interest rates and reduced inflationary pressure to start the next budget cycle are expected to drive economic expansion, leading to a rise in job openings. A 25 per cent rise in job openings due to expansion in sales and service occupations is expected to start the next budget cycle. This and the projected fall in job seekers will tighten the labour market as employers face challenges filling job openings and the cumulative imbalance grows.



Figure 5: CER Job Openings By Occupational Group, 2023-2033



Hiring challenges are typically experienced when job openings exceed the number of job seekers for each occupation. The CER is expected to experience hiring challenges within the construction, retail trade, education, and accommodation/food services industries, specifically in the following occupations:

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

Surpluses are defined as periods where the total number of job seekers exceeds the number of job openings for each occupation. The CER is expected to see surpluses within the following occupations:

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

Determining which occupations are projected to face hiring challenges is done primarily by looking at which occupations are expected to be the biggest contributors to the cumulative imbalance (shortage) problem. Analyzing which industries

are projected to drive job openings and experience higher-than-average employment growth are also considered. (Refer to Appendix 4 for more details).

Table 2: Detailed Industry Outlook, 2023-2033

Industry	Employment Growth (Average Annual Growth Rate, %)			Expansion Demand	Replacement Demand	Total Job Openings
	2023-2026	2027-2030	2031-2033	2023-2033	2023-2033	2023-2033
Total Industries	7.7	-1.1	-1.9	231,500	247,200	478,800
Agriculture, fishing and forestry	5.6	-1.1	-1.9	900	2,600	3,500
Mining and oil and gas extraction	1.3	-0.4	-0.3	1,300	13,400	14,800
Oil and gas extraction	-0.2	-0.7	-0.4	-1,800	9,700	7,900
Mining	-6.9	0.4	-0.3	-1,000	300	-700
Support activities for mining and oil and gas extraction	10.2	0.4	-0.2	4,100	3,400	7,600
Utilities	-0.4	1.9	1.0	700	2,400	3,100
Construction	1.0	1.1	0.0	7,800	21,400	29,200
Residential building construction	0.2	1.7	-1.2	700	5,000	5,700
Non-Residential building construction	1.8	1.2	2.1	1,500	2,000	3,500
Heavy and civil engineering construction	-1.4	-0.8	0.8	-600	1,800	1,200
Specialty trade contractors	1.5	1.1	0.1	6,200	12,600	18,700
Manufacturing	7.1	1.3	0.6	15,100	12,300	27,400
Food, beverage and tobacco manufacturing	9.0	1.3	0.6	3,700	2,400	6,100
Wood product manufacturing	2.8	-0.8	6.8	600	600	1,200
Fabricated metal product manufacturing	40.2	1.4	0.6	4,500	1,600	6,000
Machinery manufacturing	11.4	1.3	0.6	2,600	1,600	4,200
Transportation equipment manufacturing	-1.5	1.2	0.6	-30	400	400
Other manufacturing	2.9	1.4	0.0	3,800	5,700	9,500
Wholesale trade	2.1	2.5	1.5	8,200	9,200	17,400
Retail trade	-1.1	2.4	1.5	11,100	23,800	35,000
Motor vehicle and parts dealers	7.9	1.2	0.7	3,800	2,900	6,600
Health and personal care stores	7.3	2.4	1.5	3,100	1,600	4,700
Online shopping	13.1	4.1	1.5	3,600	1,500	5,100
Other retail trade	-2.9	2.4	1.6	700	17,900	18,600
Transportation and warehousing	0.5	2.7	1.1	11,100	17,500	28,600
Air transportation and support activities	-2.3	2.2	1.1	200	3,800	4,000
Rail transportation	2.3	1.8	1.1	500	700	1,100
Truck transportation	0.9	2.0	1.1	2,500	3,800	6,300
Other Transportation	5.3	4.5	1.0	200	2,300	2,500
Postal service, couriers and messengers	-1.5	1.5	1.0	8,300	5,800	14,100
Warehousing and storage	-3.9	1.7	1.1	-500	1,200	600
Finance, insurance and real estate	2.0	2.0	1.2	12,600	16,300	28,900
Finance	3.4	2.2	1.2	7,700	7,200	14,800
Insurance carriers and related activities	-1.6	2.0	1.2	500	2,700	3,200
Real estate and rental and leasing	2.2	1.8	1.2	4,400	6,400	10,800

Table 2: Detailed Industry Outlook, 2023-2033 (continued)

Industry	Employment Growth (Average Annual Growth Rate, %)			Expansion Demand	Replacement Demand	Total Job Openings
	2023-2026	2027-2030	2031-2033	2023-2033	2023-2033	2023-2033
Professional, scientific and technical services	3.9	2.1	1.2	38,500	33,600	72,100
Architectural, engineering and related services	-1.6	2.2	1.3	1,700	8,000	9,700
Computer systems design and related services	7.4	2.0	1.2	17,000	10,500	27,500
Management, scientific and technical consulting services	11.2	2.0	1.2	7,900	4,500	12,400
Legal, accounting, design, research and advertising services	3.4	2.1	1.2	11,900	10,600	22,500
Business and building support services (excluding travel)	14.5	2.1	1.3	22,600	10,000	32,600
Educational services	-0.7	1.2	1.6	4,900	17,300	22,100
Elementary and secondary schools	-1.0	1.0	1.5	1,800	10,500	12,300
Community colleges	0.7	1.3	1.9	500	1,100	1,600
Universities	-2.8	1.3	1.9	-300	3,200	2,900
Private and trades education	2.9	1.7	1.8	2,700	2,500	5,300
Health care and Social assistance	2.3	2.9	2.8	40,500	29,800	70,300
Ambulatory health care services	8.3	3.1	3.2	26,600	11,500	38,200
Hospitals	-3.4	3.1	3.2	2,300	8,300	10,600
Nursing and residential care facilities	-0.3	3.1	3.2	3,800	4,000	7,800
Social assistance excluding child care	3.5	1.9	1.7	4,000	2,600	6,600
Child day care services	5.5	2.3	0.6	3,800	3,300	7,000
Information, culture and recreation	-0.8	2.5	1.5	4,700	8,700	13,400
Publishing industries	-5.1	2.6	1.5	-500	700	200
Motion picture and sound recording industries	0.5	2.5	1.5	400	500	900
Telecommunications	-2.6	2.5	1.5	200	1,700	1,900
Broadcasting, data processing and information	0.3	2.3	1.5	500	900	1,400
Performing arts, spectator sports and related industries	4.0	2.6	1.5	2,400	1,600	4,000
Entertainment and recreation	-1.1	2.6	1.5	1,700	3,200	4,900
Accommodation and food services	4.8	2.9	1.8	22,000	10,300	32,300
Accommodation services	11.2	2.9	1.8	3,300	1,400	4,700
Food services and drinking places	4.2	2.9	1.8	18,700	8,900	27,600
Repair, personal and non-profit services	13.3	2.6	1.5	22,400	9,200	31,600
Automotive repair and maintenance	19.7	2.4	1.5	4,900	1,700	6,700
Personal, non-automotive repair and non-profit services	12.1	2.6	1.5	17,500	7,400	24,900
Public administration	1.5	1.8	1.6	7,000	9,600	16,600
Federal government public administration	1.8	1.8	1.6	2,100	2,800	4,900
Provincial and territorial public administration	-5.7	1.8	1.6	-2,000	1,300	-700
Local and Indigenous public administration	5.2	1.8	1.6	6,900	5,500	12,400

Figure 6: CER Total Job Openings By Educational Type, 2023-2033

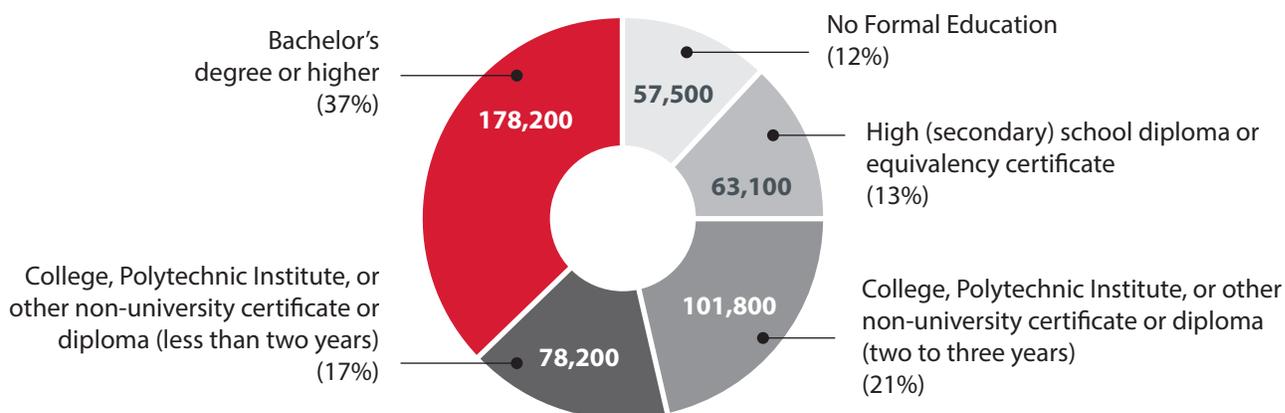
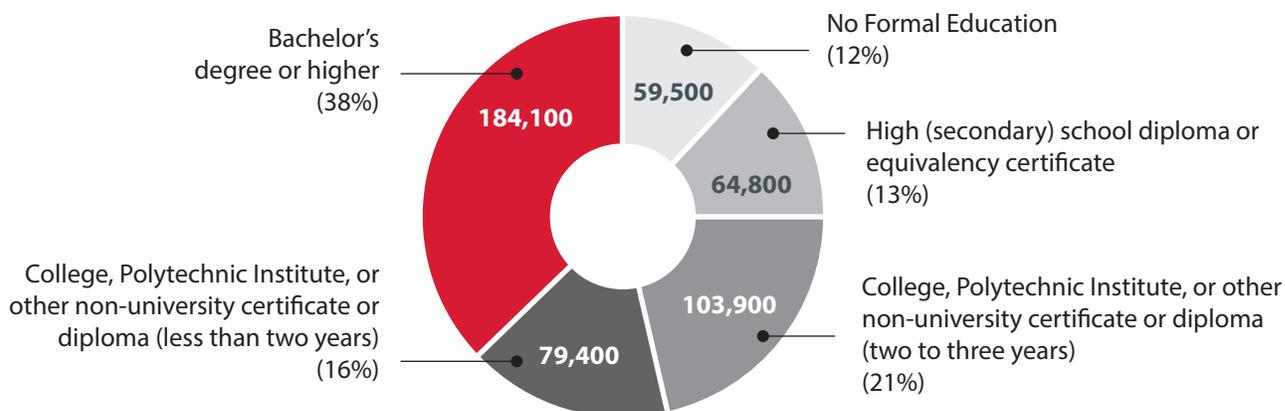


Figure 7: CER Total Job Seekers by Educational Type, 2023-2033



The CER may face slight challenges filling job vacancies requiring the completion of a community college, polytechnic institute, or other non-university institute.

Figure 6 shows the breakdown of total job openings by Training, Education, Experience and Responsibility (TEER) requirements over the current and next budget cycle. Figure 7 also shows the total number of job seekers by educational qualifications over the current and next budget cycle.

Both figures indicate a surplus of job seekers with no formal education or bachelor's degree or higher. 178,000 job openings require a bachelor's degree or higher, while 184,000 job seekers meeting this requirement are expected within the same time frame. A similar pattern can be seen for occupations requiring no formal education.

On the other hand, the opposite can be said for job openings requiring the completion of a community college, polytechnic institute, or other non-university institute (TEER category 2 and 3). This also includes job openings that require the completion of an apprentice training program or specific on-the-job training for trade occupations such as technical maintenance, construction, and industrial trades. One caveat is that historically, job openings within the trades have not necessarily translated to a need for more education or increased wages. It is typical of some trade employers to hire a mix of trained and untrained workers, as opposed to setting a training requirement for all workers.

Hiring challenges are expected within the current and next budget cycle for job openings with educational requirements that fall into TEER categories 2 and 3. This is consistent with the specific occupations projected to experience hiring challenges.

3. Policy Implications: Tackling Labour Market Imbalances

The CER Labour Market Outlook provides a 10-year forecast of future labour supply and demand by industry, occupation, and education in the CER from 2023 to 2033. It supports both the government and the public in policy and decision-making. The future labour market imbalances projected in the report have multiple policy implications on how to tackle the challenges.

Policy Action 1: Immigration support and advocacy are essential in addressing some of the projected hiring challenges. However, it is vital to attract people with the skills where shortages abound.

Last year, the federal government announced its 2023-2025 immigration plan to attract 1.45 million new immigrants over the next three years. The Calgary Economic Region (the entire province, for that matter) has seen record-breaking numbers in migration. Alberta is projected to record a population growth of 4.6 per cent in 2023, one of the highest growth rates ever recorded. Despite these numbers, record job vacancy numbers persist across cities in the province. Furthermore, Alberta had the highest unemployment rate for landed immigrants last year compared to other provinces in Canada. The persistent job vacancy issue, combined with the high unemployment rate among immigrants despite record-high immigration, indicates that a growing labour force will not be beneficial if not equipped with the right skills.

Making sure immigration policies are targeting people of the right age and skills is necessary for ensuring higher immigration targets translate into cutting down job vacancies and ensuring higher labour productivity and economic growth. As of the second quarter of 2023, nearly a third of the total job vacancies within the province were within the construction, accommodation, and food services industries (all relatively lower paid, lower skill required, and with lower benefits). Most jobs within these industries require a high school or trade diploma. However, nearly half of international immigrants who relocate have a bachelor's degree or higher. It can be observed that most of Alberta's job openings do not require a bachelor's degree or higher. Given that most immigrants have a bachelor's degree, it may likely explain the extended time it takes to find jobs within their fields. This educational mismatch between job openings and unemployed immigrants partly explains why job vacancy issues persist despite the rapid increase in net migration. There is also the issue of international applicants who possess higher

degrees, which really are only applicable in certain jurisdictions.

Overall, immigration plans to fill labour gaps and offset the region's aging workforce may face challenges from a skills mismatch standpoint. Current projections show construction, accommodation, and food services shortages. Unless the policy targets individuals with the skills to work in these industries, immigration numbers may not necessarily ease some current and projected shortages.

Policy Action 2: Support for easing regulation and licensing requirements in particular professions that makes sense will effectively address shortages while reducing underemployment among foreign-trained workers.

In the earlier section, we discussed the importance of ensuring immigration policies target professionals with a suitable skill set. However, education and training, combined with attracting the right workers outside the region, are insufficient. Many foreign-trained workers face significant barriers from a regulation standpoint that prevent them from practicing within their field upon relocation. As a result, Calgary may face shortages within occupations where the region already has many unlicensed but qualified workers. To cover all regulated occupations is tasking, so a few will be used in this section to highlight the overall argument.

One relatively faster way of addressing shortages within regulated occupations is removing significant barriers qualified professionals face in getting licensed. For example, to practice medicine in Canada, a foreign-trained doctor, in addition to a degree from a recognized medical school, must undergo a Canadian residency, write certain examinations and "licentiate" from the Medical Council of Canada and be certified through examination by either the Royal College of Physicians and Surgeons of Canada (RCPSC) or the College of Family Physicians of Canada (CFPC). The province in which the physician intends to practice then determines if the candidate should be licensed.

This takes time and is extremely costly, discouraging many foreign-trained doctors with years of experience. Immigration targets for professionals who likely may not be able to practice within the short term defeat the purpose of expediting their pathway to the province. Steps needed to be taken to shorten the time it takes for foreign-trained professionals to be licensed to practice while eliminating the need for Canadian experience for workers with significant years of foreign experience.

In Ontario, for example, under the Fair Access to Regulated Professions and Compulsory Trades Act, regulated professions in Ontario must now expedite the registration process for internationally trained applicants. The new regulations require a maximum decision-making time of six months to achieve a registration decision in at least 90 per cent of cases within this timeframe. Another example is the case of teacher shortages in British Columbia: The North Okanagan-Shuswap School District in 2018 began hiring people without teaching certification to do on-call work that matched the description of a typical teaching job. One more example was the shortage of educational assistants in Ontario in 2021: There was a shortage of education assistants (EAs) who provided support to students with special needs. The Thames Valley District School Board in southwestern Ontario dropped some qualification criteria and began hiring final-year students temporarily. Finally, the Alberta government decided in 2023 to remove one level of training for school bus drivers in the province to help address labour shortages. Previously, aspiring school bus drivers had to take mandatory entry-level training (MELT) to get their Class 2 licence, a requirement for certain school buses in Alberta. The removal of this requirement is expected to increase the pool of Class 2 licence holders and eligible school bus drivers as a result.

Measures like this to cut red tape and expedite the integration of foreign-trained professionals will go a long way to address some of the shortages the cities across the province face.

Policy Action 3: Introducing mobility incentives can help attract surplus labour from other provinces to occupations experiencing shortages.

Across Canada, physicians are restricted to the province or territory where they obtained their licenses. Other than a few exceptions, practising in a different province or territory implies a lengthy application process, which can also be financially costly. For example, applying for a full license in Alberta as of 2020 required an annual fee of \$1,960, \$395 to review qualifications, \$160 per document to verify credentials and \$800 to register in Alberta upon successful application. This cost becomes significant for physicians who practice in multiple jurisdictions. 13 provincial and territorial medical regulatory authorities license physicians separately. Doctors and nurses are similarly trained in Canada, but practicing in a province or territory can be cumbersome and expensive.

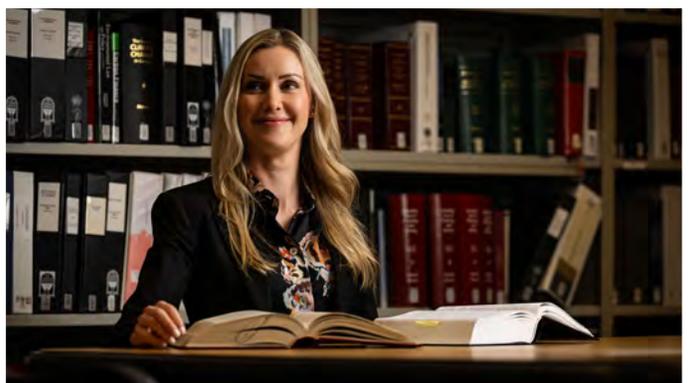
A single licensing system or temporary inter-provincial mobility agreement will provide some relief to regulated occupations facing shortages within cities across Alberta. It could help alleviate the pressure on the medical workforce serving patients in cities across Canada. It would also allow for more efficient responses to health care delivery.

The Law Society of Alberta, under the National Mobility Act (NMA), allows legal practitioners from participating jurisdictions to work freely for 100 days per calendar year in other jurisdictions without a permit. This agreement also will enable practitioners from other jurisdictions to exceed 100 days only with permission. This year, Ontario recently introduced the Your Health Act 2023 bill, allowing healthcare workers registered in other provinces and territories to start working and caring for people in Ontario without first registering with one of Ontario's health regulatory colleges.

Mobility policies that allow for more effortless movement between provinces will help address some of the shortages faced in regulated occupations across cities in Alberta.

Policy Action 4: Increased municipal government advocacy for provincial government investment in education and training programs for occupations with acute shortages can help ease projected labour shortages.

Increased investment in skills training in occupations is a step towards filling some of these projected shortages by increasing the number of new entrants in targeted occupation. The 2023 Alberta budget highlighted steps the Alberta government is taking to address skills development across the province. This included investing \$193 million to create nearly 8,000 new seats in high-demand post-secondary programs across the province, such as health care, business, and technology. The budget also included \$86 million to expand healthcare training programs, most notably \$44 million over



the next three years to create 1,400 new seats on health-related programs (nurses, paramedics, and other technicians). Approximately \$50 million over the next three years will be allocated to the Alberta Training for Work program to help unemployed or underemployed Albertans gain the right skills to increase labour force participation.

From the municipal perspective, increased investment targeted in the areas where Calgary faces the most challenges will help address some projected shortages by increasing new entrants within these occupations.

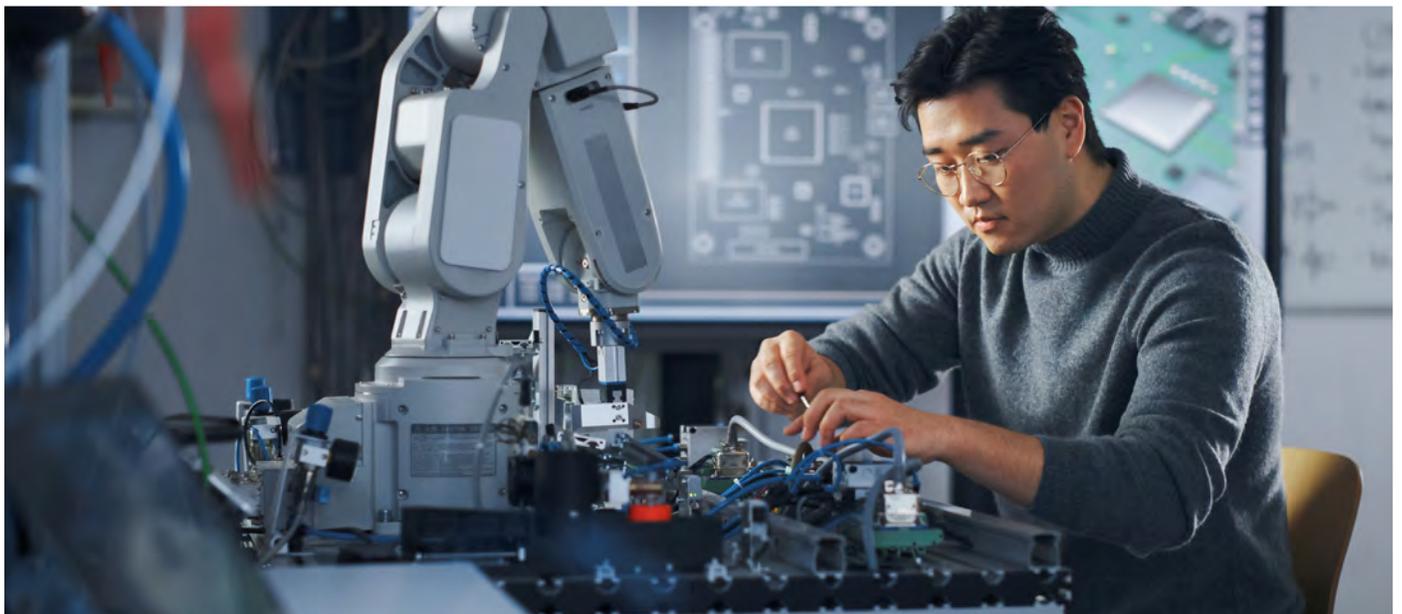
Policy Action 5: Increasing job market participation by underrepresented groups, especially encouraging youth and women's participation in the labour force, can help mitigate the decreasing trend and address some occupational shortages.

Youth participation rates have decreased, particularly for female youth since the pandemic. With many projected shortages in typically part-time occupations, efforts to increase participation among young people still in school will address some of these shortages.

Policies designed to increase women's participation will help address some occupational shortages. Women in the CER regained lost jobs after the pandemic as participation rates rebounded. However, participation rates are still yet to recover to pre-pandemic levels. Several reasons, namely, the gender pay gap, costly childcare and opting to return to school to

better their income prospects, can be cited as main explanations of why participation rates amongst women have not returned to prior levels. Another plausible explanation is that the youth, female youth in particular, have re-evaluated how they want to live and prefer reduced work hours in favour of extracurricular activities in school, volunteer work and studies.

Creating more opportunities for women in skilled trades, investing in more affordable and flexible daycare, and better maternity leave benefits will help increase participation among women within the region, mitigating the decline in labour force participation.





Appendices

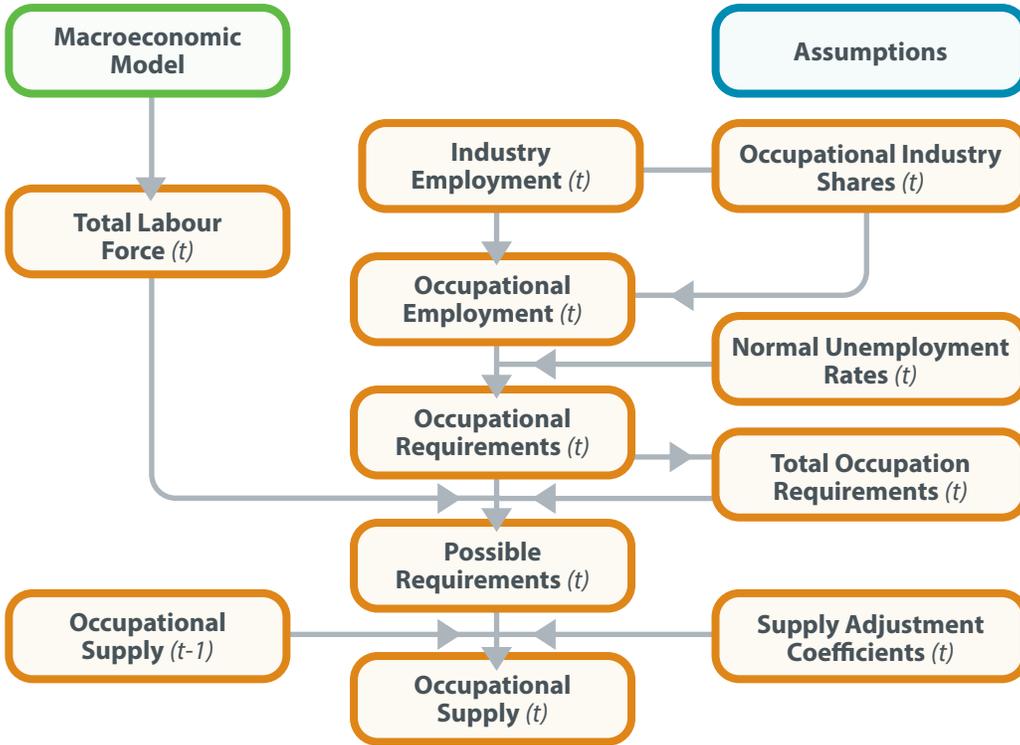
Appendix 1: Methodology

**Appendix 2: Projected CER Labour Market Imbalances
by 4-digit NOC Occupations**

**Appendix 3: Overview of Prominent Occupational
Outlook Reports across Canada**

Appendix 4: Glossary

Appendix 1: Methodology



The model used in analyzing the CER starts with generating employment and net migration and forecasts by industry estimated in a separate macroeconomic model. The second step in the process is determining occupation employment, occupation demand, occupation supply as measured by the labour force, and the components of labour force change across all 4-digit National Occupation Classification (NOC) at the municipal level over a 10-year period (between 2023-2033).

Occupational Employment

The approach in determining occupational employment is based on the employment share approach. This approach estimates an occupation’s total employment as the sum of its share within all industries. Share assumptions are based on the latest share statistics derived from Statistics Canada’s census data. For example, suppose medical doctors’ share of health care industry employment is 25 per cent, and health care employment is forecast to be 100. In that case, the forecast of medical doctors employed in the health care industry is 25. If i represents occupation, j represents industry and t means time, occupational employment at a point in time can be represented as follows:

$$\text{Occupational Employment}_{i,t} = \text{Occupational Share}_{t-1}^{i,j} \times \text{Employment Forecast}_t^j \quad (1)$$

Outside of the census occupational census data, some additional considerations are also considered in determining the share of occupation within each industry within the forecast period. For example, the share of secondary school teachers factors in the distribution of the school-age population. Also, higher-level occupations such as managers are assumed to fluctuate less in response to economic cycles.

Labour Force Demand

This refers to Occupational Employment defined above plus the normal unemployment (UNR) level for an occupation i . The normal level of unemployment refers to unemployment normally observed for an occupation because of the nature of the work and the industries in which it is primarily employed.

$$\text{Labour Force Demand}_{i,t} = \frac{\text{Employment}_{i,t}}{1 - \frac{\text{UNR}_{i,t}}{100}} \quad (2)$$

Labour Force Supply/Possible Labour Force

This variable for each occupation is computed as a share of the total labour force in the economy, where the share is the ratio of the occupation's labour force demand to the demand for all occupations in the economy.

$$\begin{aligned} & \text{Possible Labour Force}_{i,t} \\ &= \left(\frac{\text{Labour Force Demand}_{i,t}}{\text{Labour Force Demand}_t} \right) \times \text{Labour Force}_t \quad (3) \end{aligned}$$

Labour Force Change

The labour force change for an occupation i is divided into the following components:

$$\begin{aligned} & \text{Labour Force Supply}_{i,t} - \text{Labour Force Supply}_{i,t-1} \\ &= \text{New Entrants}_{i,t} - \text{Deaths}_{i,t} - \text{Retire}_{i,t} \\ & \quad + \text{Net In-Mobility}_{i,t} \quad (4) \end{aligned}$$

Components of Labour Force Change⁴

$$\text{Deaths}_{i,t} = \sum_k (\text{Death Rate}_{i,k,t} \times \text{Labour Force}_{i,k,t-1}) \quad (5)$$

$$\begin{aligned} & \text{Retire}_{i,t} \\ &= \sum_k (\text{Retirement Rate}_{i,k,t} \times \text{Labour Force}_{i,k,t-1}) \quad (6) \end{aligned}$$

$$\begin{aligned} \text{New Entrants}_{i,t} &= \left(\frac{\text{Employment}_{i,t-1}}{\text{Employment}_{t-1}} \right) \times \\ & \sum_k ((\text{Participation Rate}_{k,t} - \text{Participation Rate}_{k-1,t-1})) \\ & \times \text{Source Population}_{k-1,t-1} \quad (7) \end{aligned}$$

$$\begin{aligned} & \text{Net In-Mobility}_{i,t} \\ &= (\text{Labour Force Supply}_{i,t} - \text{Labour Force Supply}_{i,t-1}) \\ & \quad - \text{New Entrants}_{i,t} + \text{Deaths}_{i,t} + \text{Retire}_{i,t} \quad (8) \end{aligned}$$

$$\begin{aligned} & \text{Net In-Migration}_{i,t} \\ &= \left(\frac{\text{Net In-Mobility}_{i,t}}{\text{Net In-Mobility}_t} \right) \times \text{Net In-Migration}_t \quad (9) \end{aligned}$$

⁴ k here refers to age groups



Appendix 2: Projected CER Labour Market Imbalances by 4-digit NOC Occupations

NOC	Occupation Title	Current Budget Cycle			Next Budget Cycle		
		2023-2026			2027-2030		
		Job Openings	Job Seekers	Cumulative Imbalance* (2026)	Job Openings2	Job Seekers3	Cumulative Imbalance* (2030)
#	Total Occupations	178,400	187,500	19,600	179,700	172,300	27,100
#0001	Legislative and senior managers	4,200	4,400	-400	3,600	3,500	-300
#1001	Administrative services managers	2,300	2,500	70	2,400	2,300	100
#1002	Managers in financial and business services	2,700	2,800	200	2,600	2,500	300
#1003	Managers in communication (except broadcasting)	10	20	30	200	100	40
#1110	Auditors, accountants and investment professionals	5,800	6,200	-300	5,100	4,900	-90
#1120	Human resources and business service professionals	4,900	5,100	100	3,800	3,600	300
#1201	Administrative and financial supervisors	700	700	20	900	900	50
#1210	Administrative and regulatory occupations	2,600	2,600	400	2,400	2,300	500
#1211	Court reporters, transcriptionists, records management technicians and statistical officers	300	300	60	300	300	70
#1220	Accounting, insurance and related business administrative occupations	2,300	2,400	50	2,100	2,000	100
#1310	Administrative, property and payroll officers	4,700	4,800	300	4,300	4,200	500
#1311	Office administrative assistants - general, legal and medical	3,200	3,400	400	3,100	3,000	500
#1320	Transportation and production logistics coordinators and customs brokers and related broker occupations	500	500	50	500	500	70
#1410	Office support and court services occupations	3,600	3,600	800	3,300	3,200	1,000
#1411	Survey, statistical and data entry occupations	500	500	100	500	500	100
#1420	Financial, insurance and related administrative support workers	2,300	2,400	100	2,000	2,000	200
#1430	Library, correspondence and other clerks	300	300	100	400	300	100
#1440	Supply chain logistics, tracking and scheduling coordination occupations	1,900	1,900	300	2,200	2,100	400
#2001	Managers in engineering, architecture, science and information systems	2,300	2,500	100	2,300	2,300	200
#2110	Physical science professionals	700	600	500	600	600	500
#2111	Life science professionals	300	400	0	300	300	10
#2112	Public and environmental health and safety professionals	300	300	0	200	200	20
#2120	Architects, urban planners and land surveyors	300	400	70	500	400	100
#2121	Mathematicians, statisticians, actuaries and data scientists	300	300	20	200	200	30
#2122	Computer and information systems professionals	4,000	4,300	-40	3,000	2,900	80
#2123	Computer, software and Web designers and developers	4,700	5,200	-100	3,000	2,900	-10
#2130	Civil and mechanical engineers	1,100	1,300	200	1,900	1,900	200
#2131	Electrical, electronics and computer engineers	900	1,000	100	1,200	1,200	100
#2132	Manufacturing and processing engineers	500	500	200	600	500	200
#2133	Natural resources engineers	600	500	400	600	500	400
#2139	Other engineers	30	30	20	50	40	20
#2210	Technical occupations in physical sciences	400	300	100	300	300	200

Appendix 2: Projected CER Labour Market Imbalances by 4-digit NOC Occupations (continued)

NOC	Occupation Title	Current Budget Cycle			Next Budget Cycle		
		2023-2026			2027-2030		
		Job Openings	Job Seekers	Cumulative Imbalance* (2026)	Job Openings ²	Job Seekers ³	Cumulative Imbalance* (2030)
#2211	Technical occupations in life sciences	500	500	30	300	300	40
#2221	Technical occupations in architecture, drafting, surveying, geomatics and meteorology	500	600	400	900	800	500
#2222	Technical occupations in computer and information systems	1,800	2,000	-70	1,500	1,500	-10
#2223	Technical inspectors and regulatory officers	700	700	200	600	600	200
#2230	Technical occupations in civil, mechanical and industrial engineering	1,000	1,000	50	1,000	900	90
#2231	Technical occupations in electronics and electrical engineering	1,200	1,200	300	1,100	1,100	400
#3001	Managers in health care	400	400	-10	600	500	0
#3110	Physicians and veterinarians	1,500	1,600	-200	1,600	1,500	-90
#3111	Dentists, optometrists and audiologists	800	800	-50	500	500	-30
#3112	Pharmacists and dietitians	500	500	-40	500	500	-20
#3120	Therapy and assessment professionals	1,500	1,600	-100	1,300	1,200	-40
#3130	Nursing and allied health professionals	400	400	-300	4,200	4,000	-100
#3210	Technical occupations in therapy and assessment	1,200	1,300	-60	1,800	1,700	10
#3211	Technical occupations in dental health care	700	700	0	500	400	20
#3212	Medical technologists and technicians	700	800	-10	800	800	20
#3220	Practitioners of natural healing	1,400	1,400	100	900	800	100
#3310	Assisting occupations in support of health services	3,900	3,700	500	4,500	4,300	600
#4001	Managers in public administration	50	90	10	100	100	20
#4002	Managers in education	300	300	-40	600	600	-10
#4003	Managers in social, community and correctional services	500	500	60	400	400	60
#4004	Managers in public protection services	100	100	10	90	90	10
#4110	Judges, lawyers and Quebec notaries	1,300	1,500	-100	1,100	1,100	-80
#4120	University professors and post-secondary assistants	-400	-600	500	1,100	1,000	600
#4121	College and other vocational instructors	700	600	100	700	700	200
#4122	Secondary, elementary and kindergarten school teachers	800	1,200	-500	2,900	2,700	-300
#4130	Social and community service professionals	1,400	1,400	-50	1,200	1,100	0
#4131	Police investigators and probation officers	60	80	-10	80	80	-10
#4132	Educational and employment counsellors	300	300	70	300	300	80
#4140	Policy and program researchers, consultants and officers	2,300	2,400	300	2,200	2,100	400
#4210	Occupations in front-line public protection services	1,500	1,800	-300	1,100	1,000	-200
#4220	Paraprofessional occupations in legal, social, community and education services	3,800	4,000	500	3,300	3,200	500
#4310	Assisting occupations in education	700	800	400	1,100	1,100	500
#4320	Assisting occupations in legal and public protection	90	200	20	300	200	30
#4410	Home care provider occupations	2,300	2,300	600	1,300	1,300	600
#4420	Primary combat members of the Canadian Armed Forces	20	30	0	20	20	0
#4510	Student monitors, crossing guards and related occupations	90	100	50	200	200	60
#5001	Managers in art, culture, recreation and sport	200	200	100	400	400	100

Appendix 2: Projected CER Labour Market Imbalances by 4-digit NOC Occupations (continued)

NOC	Occupation Title	Current Budget Cycle			Next Budget Cycle		
		2023-2026			2027-2030		
		Job Openings	Job Seekers	Cumulative Imbalance* (2026)	Job Openings2	Job Seekers3	Cumulative Imbalance* (2030)
#5110	Librarians, archivists, conservators and curators	50	40	0	80	70	0
#5111	Writing, translating and related communications professionals	600	700	100	600	600	200
#5112	Creative and performing artists	700	700	70	600	600	90
#5210	Technical occupations in libraries and public archives	60	60	20	100	90	20
#5211	Technical occupations in motion pictures, broadcasting and the performing arts	400	400	100	500	400	100
#5212	Graphic and interior designers	1,000	1,100	80	900	900	100
#5310	Occupations related to museums and art galleries	0	20	20	30	30	20
#5311	Photographers and support occupations in arts and culture	200	300	100	200	200	100
#5312	Occupations in creative and performing art	800	900	200	700	700	200
#5320	Athletes, coaches, referees and related occupations	200	200	100	300	200	200
#5410	Program leaders and instructors in recreation, sport and fitness	300	500	400	700	700	400
#5510	Support occupations in art and culture	40	50	30	50	40	30
#6001	Corporate sales managers	1,200	1,300	-200	1,200	1,100	-100
#6002	Retail and wholesale trade managers	2,100	2,600	-500	5,000	4,800	-300
#6003	Managers in food service and accommodation	2,500	2,600	500	2,300	2,300	600
#6004	Managers in customer and personal services	800	800	50	400	400	60
#6201	Retail sales supervisors	-10	100	30	700	700	60
#6202	Service supervisors	1,500	1,500	400	1,300	1,200	500
#6210	Technical sales specialists in wholesale trade and retail and wholesale buyers	1,200	1,300	-80	1,400	1,300	-30
#6220	Specialized occupations in services	900	900	400	900	800	500
#6310	Insurance, real estate and financial sales occupations	2,100	2,100	-300	2,400	2,300	-200
#6320	Cooks, butchers and bakers	2,000	2,000	900	2,000	1,900	1,000
#6321	Hairstylists and estheticians	3,200	3,100	800	1,400	1,300	800
#6322	Shoe repairers, shoemakers and upholsterers	40	30	10	20	20	10
#6410	Retail salespersons and non-technical wholesale trade sales and account representatives	1,700	2,300	1,500	6,200	5,900	1,800
#6420	Occupations in personal service	200	200	60	200	200	60
#6430	Occupations in food and beverage service	400	400	200	300	300	200
#6431	Occupations in travel and accommodation	700	700	400	900	900	400
#6432	Tourism and amusement services occupations	20	30	10	40	40	10
#6440	Customer and information services representatives	2,600	2,700	300	2,400	2,300	400
#6441	Security guards and related security service occupations	2,100	2,100	200	900	800	200
#6510	Cashiers and other sales support occupations	-300	400	800	4,400	4,200	1,000
#6520	Food support occupations	4,500	4,700	2,100	4,600	4,400	2,300
#6521	Support occupations in accommodation, travel, tourism and amusement services	60	200	100	300	300	100
#6522	Support occupations in personal services	600	600	40	300	300	50
#6531	Cleaners	6,800	6,700	800	3,700	3,600	900

Appendix 2: Projected CER Labour Market Imbalances by 4-digit NOC Occupations (continued)

NOC	Occupation Title	Current Budget Cycle			Next Budget Cycle		
		2023-2026			2027-2030		
		Job Openings	Job Seekers	Cumulative Imbalance* (2026)	Job Openings ²	Job Seekers ³	Cumulative Imbalance* (2030)
#6532	Service support and related occupations	500	500	100	300	300	100
#7001	Managers in construction and facility operation and maintenance	2,500	2,600	-200	3,100	3,000	-100
#7002	Managers in transportation and postal and courier services	500	500	-100	700	700	-100
#7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	1,300	1,400	30	1,300	1,200	100
#7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	800	900	-50	800	800	-10
#7210	Machining, metal forming, shaping and erecting trades	2,500	2,400	500	1,000	1,000	600
#7220	Technical electrical trades and electrical power line and telecommunications workers	1,000	1,000	400	1,100	1,000	500
#7230	Plumbers, pipefitters and gas fitters	700	700	300	700	600	300
#7231	Carpenters and cabinetmakers	1,100	1,100	300	1,100	1,100	400
#7232	Bricklayers and insulators	200	200	100	200	100	100
#7240	Machinery and transportation equipment mechanics (except motor vehicles)	1,500	1,600	-40	1,400	1,400	30
#7241	Automotive service technicians	3,000	2,700	40	1,300	1,200	100
#7242	Small engine and equipment mechanics and related repairers (including electrical components)	200	200	20	100	100	30
#7250	Crane operators and water well drillers	90	100	10	90	80	20
#7260	Transportation officers and controllers	-20	70	200	600	600	300
#7299	Other technical trades	100	100	20	50	50	20
#7310	Concrete finishers, tilesetters and plasterers	400	400	200	400	400	200
#7311	Roofers, glaziers, painters, decorators and floor covering installers	900	900	400	800	700	400
#7320	Building maintenance installers, servicers and repairers	1,700	1,700	100	1,500	1,400	200
#7330	Transport truck and transit drivers	4,200	4,500	-100	4,400	4,200	30
#7331	Train crew operating occupations	60	70	-10	70	70	0
#7340	Operators, drillers and blasters	500	500	200	400	400	200
#7410	Mail and message distribution occupations	300	300	-30	700	700	0
#7420	Transport equipment operators, utility maintenance and related maintenance workers	600	600	200	500	500	200
#7510	Longshore workers and material handlers	1,800	2,100	-600	2,500	2,400	-500
#7511	Trades helpers and labourers	1,300	1,300	600	1,400	1,300	700
#7520	Taxi, personal service and delivery service drivers	1,800	1,800	90	2,100	2,000	200
#7521	Water and rail transport operators and labourers and related occupations	200	300	10	200	200	20
#8001	Managers in natural resources production and fishing	400	300	20	300	300	30
#8002	Managers in agriculture, horticulture and aquaculture	1,500	1,800	-300	300	300	-200
#8201	Supervisors, logging and forestry	100	100	10	60	60	20
#8202	Contractors and supervisors, mining, oil and gas	400	400	100	300	200	200

Appendix 2: Projected CER Labour Market Imbalances by 4-digit NOC Occupations (continued)

NOC	Occupation Title	Current Budget Cycle			Next Budget Cycle		
		2023-2026			2027-2030		
		Job Openings	Job Seekers	Cumulative Imbalance* (2026)	Job Openings ²	Job Seekers ³	Cumulative Imbalance* (2030)
#8203	Contractors and supervisors, agriculture, horticulture and related operations and services	600	600	-30	300	300	-20
#8310	Underground miners, oil and gas drillers and related occupations	200	200	100	100	100	100
#8311	Logging machinery operators	10	10	0	0	0	10
#8312	Fishing vessel masters and fishermen/women	0	0	0	0	0	0
#8410	Mine service workers and operators in oil and gas drilling	60	50	30	30	30	30
#8411	Logging and forestry workers	30	40	10	10	10	10
#8412	Workers in agriculture and fishing occupations	300	400	20	50	50	30
#8510	Agriculture, horticulture and harvesting labourers and related occupations	400	400	-40	60	50	-30
#8511	Mine and oil and gas drilling, services and related labourers	100	90	40	30	30	40
#8512	Logging, forestry, landscaping and other related labourers	1,800	1,900	300	900	900	300
#9001	Managers in manufacturing and utilities	1,300	1,300	-200	900	900	-200
#9201	Supervisors, processing and manufacturing occupations	400	400	0	300	300	10
#9202	Supervisors, assembly and fabrication	80	70	10	40	40	10
#9210	Utilities equipment operators and controllers	400	400	0	400	400	20
#9310	Central control and process operators in processing and manufacturing	300	300	-50	300	300	-40
#9320	Aircraft assemblers and aircraft assembly inspectors	0	0	0	0	0	0
#9410	Machine operators and related workers in mineral and metal products processing and manufacturing	300	300	50	100	100	50
#9411	Machine operators and related workers in chemical, plastic and rubber processing	90	70	30	70	60	40
#9412	Machine operators and related workers in pulp and paper production and wood processing and manufacturing	70	60	20	50	50	20
#9413	Machine operators and related workers in textile, fabric, fur and leather products processing and manufacturing	80	70	30	80	80	30
#9414	Machine operators and related workers in food, beverage and associated products processing	1,400	1,300	-200	600	600	-200
#9415	Printing equipment operators and related occupations	70	60	40	70	70	40
#9420	Mechanical, electrical and electronics assemblers and inspectors	400	400	90	300	300	100
#9421	Furniture, wood, plastic and other products assemblers, finishers and inspectors	600	600	90	400	400	100
#9510	Labourers in processing, manufacturing and utilities	2,300	2,300	100	1,200	1,200	200

*A positive value indicates a potential shortage of workers and a negative number indicates a potential surplus of workers

Appendix 3: Overview of Prominent Occupational Outlook Reports Across Canada

Title	Geography	Timing	Last Update
Alberta's occupational outlook, 2021-2030 [revised]	Alberta	10-year outlook, updated every two years	July 2023
Alberta occupational demand outlook at 3 digit NOC, 2021 - 2025: Calgary economic region	Calgary Economic Region	5-year outlook, updated every two years	May 2022
British Columbia Labour Market Outlook	British Columbia	10-year outlook, updated annually	2022
Saskatchewan Detailed Occupational Outlook	Saskatchewan	5-year outlook, updated annually	2022
Manitoba Labour Market Outlook	Manitoba	5-year outlook, updated annually	2022
Ontario's Labour Market Outlook	Ontario	5-year outlook, updated every two years	N/A
Quebec Labour Market Outlook	Quebec	10-year outlook, updated every two years	N/A
New Brunswick Labour Market Outlook	New Brunswick	10-year outlook, updated every two years	2023
Newfoundland and Labrador Occupational Projections	Newfoundland and Labrador	10-year outlook, updated annually	June 2023
Employment and Social Development Canada (ESDC)-Canadian Occupational Projection System (COPS)	Canada and all Provinces	10-year outlook, updated every two years	2022

*Note: the Alberta Occupational Demand Outlook for the Calgary Economic Region looks at the occupation demand for CER at 3 Digit NOC of the sub-major groups of classification. represents the aggregation of several minor groups and thus represents the three-digit code used by the NOC. There are 89 sub-major groups in NOC 2021 Version 1.0. As a comparison, this report reflects the labour market outlook with projections at 4-digit National Occupational Classification levels. The National Occupational Classification (NOC) 4-digit refers to the Minor Group of the classification, representing the domain in which an occupation is carried out (occupational domain). It aggregates several unit groups and thus represents the four-digit code used by the NOC. There are 162 minor groups in NOC 2021 Version 1.0.

Appendix 4: Glossary

Calgary Economic Region

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

Employment

The condition of having work while receiving compensation for it. This refers to the number of people who are working at a particular point in time. This number includes both full and part-time employees.

Expansion Demand or Labour Demand Change

This refers to job openings that arise due to economic growth or expansion.

Immigrants

Immigrants are people who move to a different country or region from the one they were born in with the intent to settle down in the new region or stay there for an extended period.

Inter-occupation mobility

This refers to the number of workers switching occupations each year.

Job Openings

Job openings are defined as the sum of expansion demand and replacement demand. Job vacancies arise due to economic growth and the replacement of previous workers.

Job Vacancy Rate

This refers to the percentage of vacant positions (out of the sum of occupied and vacant positions) for a given industry or occupation.

Labour Force Demand

This refers to total employment, adjusted for the normal level of unemployment for an occupation.

Labour Force Participation Rates

This refers to the percentage of the labour force in the source population– the labour force divided by the source population multiplied by 100.

Labour Force Supply Change

This refers to the sum of new entrants and net in-mobility less the number of deaths and retirements.

Labour Market Tightness Rank

This refers to a number that reflects the degree of tightness (difficulty of finding workers) in the labour market. This is computed as the weighted average of three metrics: the difference between the unemployment rate and the normal unemployment rate, the total job openings as a percentage of the labour force, and the percentage of the total labour force that needs to be sourced through migration.

Net Migration

Net migration is the total number of immigrants (people moving into a given country) minus the number of emigrants (people moving out of the country).

Net Mobility

Net mobility refers to net migration plus inter-occupation mobility and other cyclical factors.

Normal Unemployment

This refers to unemployment normally observed for an occupation because of the nature of the work and the industries in which it is primarily employed.

Replacement Demand

This refers to job openings that arise due to the need to replace workers for reasons such as death, retirement, disabilities, and other reasons.

School Leavers (New Entrants)

The number of new entrants to the labour force focuses on the “increase” in the number of young people entering the labour force from 15 to 30 years of age. This also refers to school leavers who enter the local labour market immediately after graduation and are in the age group 15 to 30.

Source Population

This refers to the number of persons aged 15 years and over who can work. The source population excludes persons in institutions such as prisons and hospitals or those who are ill or disabled and unable to work.

Unemployment

This refers to persons actively looking for work but cannot find it at a specified time – calculated as the labour force count minus employment count.

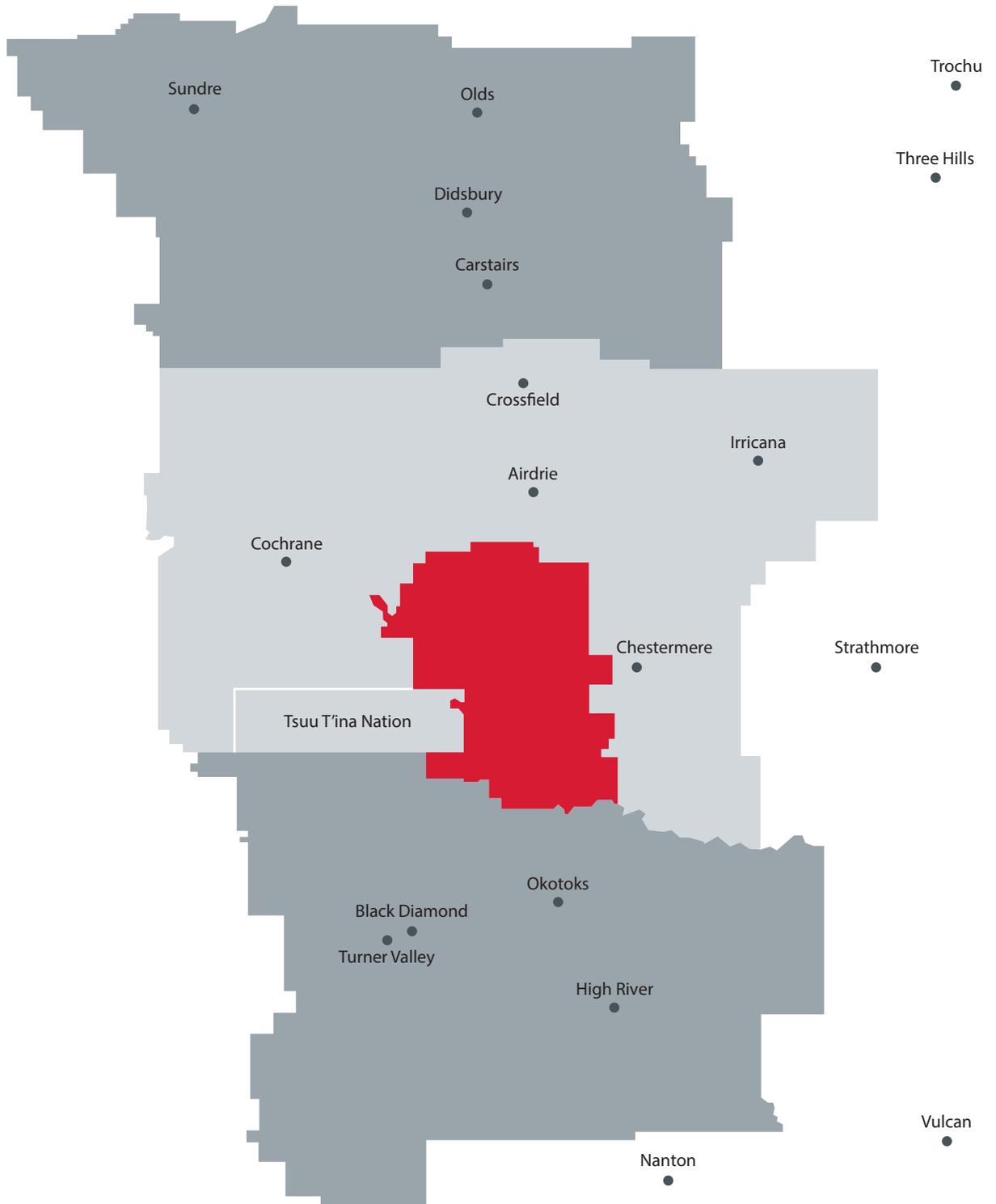
Unemployment Rate

This refers to the percentage of the labour force that is unemployed at a specified point in time – calculated as the unemployment count divided by the labour force count multiplied by 100.

Working Age Population

The working-age population is the total population in an area that is considered able and likely to work based on the number of people in a predetermined age range. In Canada, this describes persons aged 15 to 64.

Calgary Economic Region Map



Legend

- + + Calgary Economic Region (CER)
- + Calgary Census Metropolitan Area (CMA)
- City of Calgary

Who We Are

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

Stanley Kongnetiman

Manager, Corporate Economics & Regulatory Affairs

Oyin Shyllon

Program Manager, Prairie Economic Gateway

Paapa Essel

Corporate Economist

Wendy Fan

Leader, Economic Analysis

Clyde Pawluk

Senior Corporate Economist

Estella Scruggs

Senior Corporate Research Analyst

For media inquiry, please contact:

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

For the technical questions, please contact:

Stanley Kongnetiman

Manager, Corporate Economics & Regulatory Affairs

stanley.kongnetiman@calgary.ca

Paapa Essel

Corporate Economist

paapa.essel@calgary.ca

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Sources:

Stokes Economics, Statistics Canada, The City of Calgary, Corporate Economics