

Labour Market Profile

Northeast Edmonton Region

Final Report

September 2024



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Executive Summary

In the Northeast Edmonton Region and the broader Edmonton Metropolitan Region, economic and employment patterns continue to evolve amid uncertainty surrounding emerging energy technologies, technological advancements and diversification of the regional economy. This has led to shifts in workforce demands and the skill sets that employers require. The complexity of these labor market challenges is further compounded by the region's role within an increasingly dynamic global energy sector. Given these factors, it is essential to evaluate the current conditions of the regional and sub-regional labor markets to develop a comprehensive labor market profile.

The Northeast Edmonton Region Labour Market Project aims to provide a comprehensive understanding of the employment landscape across key areas within the region. The project focuses on several major employment areas which are critical hubs of industrial activity, contributing significantly to the economic growth and employment opportunities in the broader Edmonton Metropolitan Region. The labor market profile provides a foundational understanding of the current employment landscape within the region, offering insights into existing industries and occupations. It includes an employment forecast that identifies occupations expected to be in demand in the short term and highlights gaps in the workforce that may arise. Additionally, the profile incorporates findings from an employer survey, which helps to inform key workforce recommendations and identifying targeted strategies.

This labour market profile serves as a tool for municipalities, employers, and policymakers to make informed decisions about workforce development, recruitment strategies, and regional economic planning. It highlights key findings from the employer survey, occupational trends, wage data, and employment forecasts for the Northeast Edmonton Region.

It is estimated that in 2023 there are over 61,000 jobs in the Study Area, which represents approximately 8% of employment in the Edmonton Region. Of these, approximately 25,000 jobs are in four industries of interest, as captured in the employer survey. Over the short term, employment growth in the selected industries related to the Northeast Edmonton Region is 3,940. This includes growth in: Mining, quarrying and oil and gas extraction (+518), Construction (+1,115), Manufacturing (+1,773) and Transportation and warehousing (+534). The fastest growing occupations in the Study Area include Transport truck and transit drivers, Machining, metal forming, shaping and erecting trades, Trades helpers and labourers, and Managers in construction and facility operation and maintenance.

The Study Area workforce include a full-time worker component of almost 80% of operations employment with an average 16% of the operations workforce hours that is overtime. Further, the results of a Study Area employer survey found that reported wages for more than half of the occupations identified were generally higher in the Study Area relative to both the Edmonton CMA and the province as a whole.

The table below displays the top occupations in the Study Area, the number of filled jobs in the Study Area, the proportion, the number of new jobs expected over the 2024 to 2028 forecast period, the average annual growth rate of each occupation over the forecast period, and the total worker shortage expected to be faced over the forecast period by regional employers.

Top Study Area Occupations, Current and Outlook to 2028

NOC Code	Occupation Title	2023 # of Jobs	New Jobs (2023-28)	Avg Annual Growth Rate	Total Gap
7330	Transport truck and transit drivers	1,687	230	2.6%	57
7210	Machining, metal forming, shaping and erecting trades	1,403	257	3.4%	85
7511	Trades helpers and labourers	1,345	176	2.5%	11
7001	Managers in construction and facility operation and maintenance	973	127	2.5%	8
7220	Technical electrical trades and electrical power line and telecommunications workers	952	132	2.6%	67
9510	Labourers in processing, manufacturing and utilities	747	153	3.8%	-
7230	Plumbers, pipefitters and gas fitters	742	102	2.6%	48
7240	Machinery and transportation equipment mechanics (except motor vehicles)	676	106	3.0%	44
7231	Carpenters and cabinetmakers	679	91	2.5%	18
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	666	92	2.6%	55
7510	Longshore workers and material handlers	624	101	3.0%	32
7340	Operators, drillers and blasters	566	81	2.7%	-
9001	Managers in manufacturing and utilities	495	103	3.9%	3
1440	Supply chain logistics, tracking and scheduling coordination occupations	510	87	3.2%	-
7520	Taxi, personal service and delivery service drivers	454	62	2.6%	22
1310	Administrative, property and payroll officers	427	66	2.9%	-
2230	Technical occupations in civil, mechanical and industrial engineering	412	65	3.0%	13
7320	Building maintenance installers, servicers and repairers	400	60	2.8%	-
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	394	53	2.6%	33
9310	Central control and process operators in processing and manufacturing	369	66	3.3%	-
Note: Data reflects estimated 2023 employment and forecast for the period 2024-2028 for the Study Area.					

The Northeast Edmonton Region faces challenges in workforce development, particularly in filling occupations that are in critical shortage. Key findings from the labour market analysis suggest that many of the region's top occupations, such as transport truck drivers, electricians, machinists, and plumbers, are experiencing gaps between demand and supply. The shortage is driven by a combination of factors, including an aging workforce, inadequate training, and increased industrial activity that is amplifying the demand for skilled labor.

A challenge in workforce development is the lack of younger workers entering skilled trades and technical fields. To address these shortages, employers and policymakers must focus on developing targeted recruitment strategies that emphasize the benefits of careers in these high-demand sectors. Collaboration with post-secondary institutions and trade schools is essential to create a steady pipeline of skilled workers who can meet the region's growing needs.

Additionally, continuing to offer competitive wages and benefits, as well as creating flexible work environments, will be crucial to attracting and retaining talent in the region. There is also a need to invest in upskilling and reskilling programs to ensure that the existing workforce is equipped to adapt to the changing technological and industrial landscape.

In summary, addressing the workforce shortages in the Northeast Edmonton Region requires a multifaceted approach that includes improving recruitment efforts, enhancing training and educational opportunities, and creating a more attractive work environment for both new and existing employees. A proactive strategy focused on workforce development will be key to meeting the region's employment needs and supporting its economic growth.

Some key findings derived from the study are presented below:

TURNAROUND EMPLOYMENT

Turnaround employment refers to the temporary, high-volume demand for workers during plant maintenance or shutdown periods, particularly in industries such as oil and gas and manufacturing.

- ▶ In the Northeast Edmonton Region, over 136 turnaround events are expected from 2024 to 2029.
- ▶ At peak periods, turnaround events can require up to 2,500 workers, creating potential short-term labor shortages. Quarters 1 and 4 for most years are notable for their high demand for turnaround workers, with overlapping schedules among employers, in the industrial sectors.

WAGE/SALARY

The report presents the average hourly wages for both starting/entry level and higher end positions for the top 20 occupations projected to grow within the Study Area. Of the occupations for which wages were reported in the employer survey, more than half (6 of 10) in the starting/entry level category were higher than those reported by the 2021 Alberta Wage and Salary Survey for both the Edmonton CMA and province as a whole. While the survey responses provide valuable insight into the wages offered by employers in the Study Area, they are not necessarily perfectly comparable to those average wages reported for the Edmonton CMA and province.

REGIONAL WORKFORCE

Commuting distances from residential areas to employment areas within the Edmonton Metropolitan Region plays a crucial role in accessing the required workforce to support employment growth. The workforce size within a 20 minute and 40 minute catchment area for employment areas across the Northeast Edmonton Region have been estimated.

- ▶ There are an estimated 250,000 potential workforce within a 20 minute travel distance of parts of the Northeast Region.¹
- ▶ There are an estimated 1,000,000 potential workforce within a 40 minute travel distance of parts of the Northeast Region.²

RECRUITMENT OPPORTUNITIES & CHALLENGES

Recruitment is the comprehensive process an organization undertakes to attract, evaluate, and select qualified candidates for job openings. According to the Employer Survey, the top three successful recruitment strategies included Career and classified websites, followed by Word of mouth / employee referrals and Company website/internal postings.

- ▶ Having an online presence is key to successful hiring.
- ▶ Company websites and internal postings are a critical recruitment tool for employers. Develop a strong employer brand to showcase company values and culture and why your company is a great place to work.
- ▶ Use a variety of sourcing channels, including job boards and career sites, social media, professional networks, and recruitment agencies to reach a broader talent pool.
- ▶ With employee referral programs cited as one of the top 3 successful recruitment strategies for finding qualified candidates, companies are encouraged to include this tool in their recruitment strategy.
- ▶ Establishing relationships with post secondary institutions can increase a company's profile and connect a company to a desired talent pool.
- ▶ Employers can provide and focus on non-monetary benefits to employment where it is difficult to offer competitive compensation and benefits. This can include providing flexible work arrangements.
- ▶ Employers can create a long term recruitment plan to develop candidates in anticipation of workforce shortages.
- ▶ Employers can utilize workplace resources to access job candidates and provide training to candidates.
- ▶ Promotional materials could be created to demonstrate how short the commute time is from urban areas in the Edmonton Metropolitan region to the major employment sites in the Study Area.

RETENTION STRATEGIES

Through the employer survey, voluntary turnover was reported to be 2.1%, and employers are projecting to lose approximately 5.5% of their operations workforce to retirement over the next 5 years. Focusing on effective retention strategies can help employers manage voluntary turnover and its associated costs.

- ▶ Companies will have increased success in worker retention by utilizing a variety of retention strategies. Retention tools that were monetary in nature (actual compensation or in-kind) represented just under half (48%) of the total successful retention strategies reported by employers surveyed.

¹ The workforce reflects those aged 15+ within the population and does not take into consideration if they are currently participating in the labour force and their specific skillset.

² The workforce reflects those aged 15+ within the population and does not take into consideration if they are currently participating in the labour force and their specific skillset.

- ▶ To encourage mature workers approaching retirement to stay longer, employers might offer incentives such as part-time hours, casual employment, or flexible work arrangements.
- ▶ Employers can create an organizational succession plan to develop candidates in anticipation of future workforce retirements.
- ▶ While offering competitive financial compensation is a crucial element to retention, a company's values, culture and work environment play a significant role in retaining employees.

TECHNOLOGICAL CHANGES AND WORKFORCE IMPACT

Technological change includes the introduction and adoption of new technologies, tools, and systems that impact how work is performed, managed, and organized. Technological change can lead to shifts in number of jobs, job roles, processes, and skills required in the workforce. While some employers noted they are planning on implementing or adopting technological change, there is a degree of uncertainty with how technological change may impact the workforce in the Study Area in the future.

To prepare for technological changes, strategies include:

- ▶ Encouraging employers to implement or adopt technological changes and fostering networking among regional stakeholders can help the Study Area stay competitive in global markets.
- ▶ Supporting employers in finding a skilled workforce for these technological advancements is crucial. Utilizing workplace resources to recruit new talent or train existing employees can be beneficial for skill development.
- ▶ Increasing employer awareness of opportunities for upskilling and reskilling workers to adapt to new technologies can further boost productivity.

WORK ARRANGEMENTS

A variety of work arrangements exist to offer flexibility to traditional employment settings. Through the employer survey, the 5 most cited work arrangements are Shift Work, Leave Policies, Remote Work / Telecommuting, Flexible Scheduling, and Part-Time Work. Some findings from the survey include:

- ▶ Given the nature of operations of the 4 industry groups included in the employer survey, shift work is a common work setting for the Northeast Edmonton Region, especially for heavy industry.
- ▶ Flexible work arrangements offer benefits to both employers and employees. For employers, these arrangements can lead to higher employee retention, cost savings, and increased engagement. For employees, benefits can include improved work-life balance, increased job satisfaction, and enhanced productivity.
- ▶ In addition, flexible work arrangements are a useful tool in a company's retention strategy. The offering of flexible work arrangements can be particularly beneficial when a company is unable to provide a competitive compensation package.
- ▶ Flexible work arrangements provide employers increased access to a broader talent pool, including qualified workers located outside the local area and to demographic groups that require flexibility in their work structure.

REMOTE WORK

The global pandemic had a significant impact on traditional work settings, requiring employers to adopt alternate work arrangements that would adhere to health and distancing protocols. Following the pandemic, remote work options continue to exist. Based on the employer survey, approximately

7.5% of workers are currently working remotely. This compares to approximately 3.6% of workers reported to have worked remotely before the pandemic.

- ▶ Employers are adapting to increased offerings of remote work, recognizing the access to a wider talent pool of potential workers and that remote work is a tool for worker retention strategies.
- ▶ While remote work can lead to increased productivity as workers can experience fewer workplace distractions and can focus on outcomes rather than hours spent at work, there is some concern that worker productivity actually decreases with remote work. Employers need to have clear expectations and deliverables in place to monitor and track employee performance in remote work arrangements.

DIVERSITY RECRUITMENT

Diversity recruitment refers to the strategies and practices organizations use to attract, hire, and retain a diverse workforce. Underemployed groups provide an underutilized labour pool for employers to access.

- ▶ Increasing awareness of current resources and supports to recruit underemployed groups. For example:
 - ▶ Disability Related Employment Supports (DRES) funding is available to assist Albertans with disabilities to gain employment and enable their full participation in the workforce. Supports can include a job coach, worksite modification or assistive technology.
 - ▶ The Government of Alberta lists locally available training and employment programs and services to help unemployed and underemployed individuals gain the skills and knowledge to gain employment.³ Examples include: Integrated training to support connection between training and application of new skills in the workforce, workplace training, and immigrant bridging.
- ▶ Expanding recruitment efforts to include underrepresented and underemployed groups could tap into valuable, underutilized labor pools, leading to greater success.
- ▶ Highlighting regional success stories of employers who have effectively hired underrepresented and underemployed individuals could enhance diversity recruitment efforts.
- ▶ Strengthening partnerships between employers and post-secondary institutions can help attract underrepresented and underemployed individuals into relevant education and training programs, benefiting both employers and workers.
- ▶ Fostering connections among regional stakeholders—such as employers, post-secondary institutions, training providers, and organizations serving underrepresented and underemployed groups—can create mutual benefits for both employers and workers.

WORKFORCE RESOURCES

Workplace resources are government funding programs that employers and their workers can access. One-third of employers surveyed reported their organization has applied for or has plans to apply for workplace resources, while approximately one-third never applied for and does not have any plans to apply for any workplace resources, and 28% were unsure whether they applied.

- ▶ Increasing awareness to employers in the Study Area about available workplace resources could help tackle employment challenges.

³ <https://www.alberta.ca/training-and-employment-services> (as of September 2024)

- ▶ The Government of Alberta lists workforce funding programs available to employers.⁴
- ▶ The Government of Alberta lists workforce contacts and employer resources to assist employers with recruiting, retaining and strengthening their workforce.⁵ The current listing includes: industry workforce partnership specialists; regional workforce consultants; and links to laws, regulations and codes.
- ▶ Employers can also contact the Alberta Government (abworkforce@gov.ab.ca) for information on current employer grants and programs available to them.
- ▶ Creating brief informational materials for employers on the availability of workplace resources and how specific workplace resources can benefit their organizations.

EDUCATION AND SKILL DEVELOPMENT

Based on the largest employed occupation groups in the Study Area, 20 top occupations have been reviewed for their education and skill requirements and the availability of education and training programs in the Edmonton Region. Of these occupations, 13 require a post-secondary certificate or degree. All have available programs in the Edmonton Region, many at multiple institutions. Seven of the top occupations do not require a post-secondary certificate or degree.

- ▶ Industry-Academic Collaborations: Encourage partnerships between educational institutions and industry to ensure curricula are aligned with current job market demands. This can include advisory boards, joint research projects, and curriculum development initiatives.
- ▶ Public-Private Partnerships: Create partnerships between government agencies, educational institutions, and private companies to address skill gaps and develop training programs tailored to industry needs.
- ▶ Industry-Specific Career Counselling: Provide career counselling that is tailored to specific industries or job roles, helping job seekers understand the qualifications and skills needed for various fields.
- ▶ Skill Mapping: Conduct skill mapping exercises to identify the skills in demand by employers and align training programs accordingly.
- ▶ Targeted Programs: Develop programs and initiatives aimed at supporting diverse and underrepresented groups, including minorities, and individuals with disabilities, to ensure they have access to employment opportunities.

⁴ <https://www.alberta.ca/resources-for-employers-and-organizations> (as of September 2024)

⁵ <https://www.alberta.ca/workforce-contacts-employer-resources> (as of September 2024)

Purpose of the Study

Economic and employment growth in the Alberta's Industrial Heartland and Edmonton Metropolitan Region has experienced significant fluctuations over the past decade. The region has seen phases of rapid expansion and severe labor shortages, followed by a global pandemic that affected local and regional employers in various ways. These economic shifts have led to substantial changes in the demand for workers and the skills required by employers.

The complexity of these labor market issues is further influenced by the integration into a larger, diverse, and evolving economic and employment region. Given these dynamics, it is crucial to assess the current state of both the regional and sub-regional labor markets to develop a comprehensive labor market profile. Labour Market Information is crucial for helping governments, businesses, non-governmental organizations, and individuals navigate the ongoing economic changes. Understanding labor patterns and trends is essential for staying competitive in a dynamic economy and labor market, which have been transformed by shifts in demographics, evolving occupational skill requirements, technological advancements, and future training needs.

For this project, municipal partners including: City of Fort Saskatchewan, Lamont County, Strathcona County, and Sturgeon County have joined with the Ministry of Jobs, Economy and Trade to undertake a Labour Market Profile study. This project will result in the development of a comprehensive labour profile for the Northeast region.

This working paper presents a profile of the regional labor force, to understand the current workforce in the Edmonton Region. It includes specific insights into the activities of organizations within the Study Area, their industry classifications, and their geographic distribution across municipalities. The survey delves into various operational aspects, such as the total number of workers, demographic profiles of the workforce, key occupations and their wage rates, overtime hours, and anticipated retirements. It also examines employers' turnaround schedules, worker details, and predominant turnaround occupations. Furthermore, the paper outlines future plans of employers, including expansion timelines, future workforce requirements for construction and operations, and key future occupations. It provides valuable data on vacant positions, recruitment and retention strategies, voluntary turnover, retirements, workplace resource utilization, technological changes, and diversity recruitment plans. This comprehensive analysis is crucial for understanding and addressing the labor market dynamics within the region.

EMPLOYER SURVEY

An employer survey was conducted from March to May of 2024 to collect labour market information from major employers in the Study Area. The survey focused on businesses primarily in industrial activities.

During the employer survey process, a total of 36 employers completed the survey, representing 60 locations throughout the Study Area. The survey captured data for the following industries: Mining, quarrying and oil and gas extraction, Construction, Manufacturing, and Transportation and warehousing, Wholesale Trade, and Retail Trade.

The results of the employer survey are presented in Appendix A.

STUDY AREA

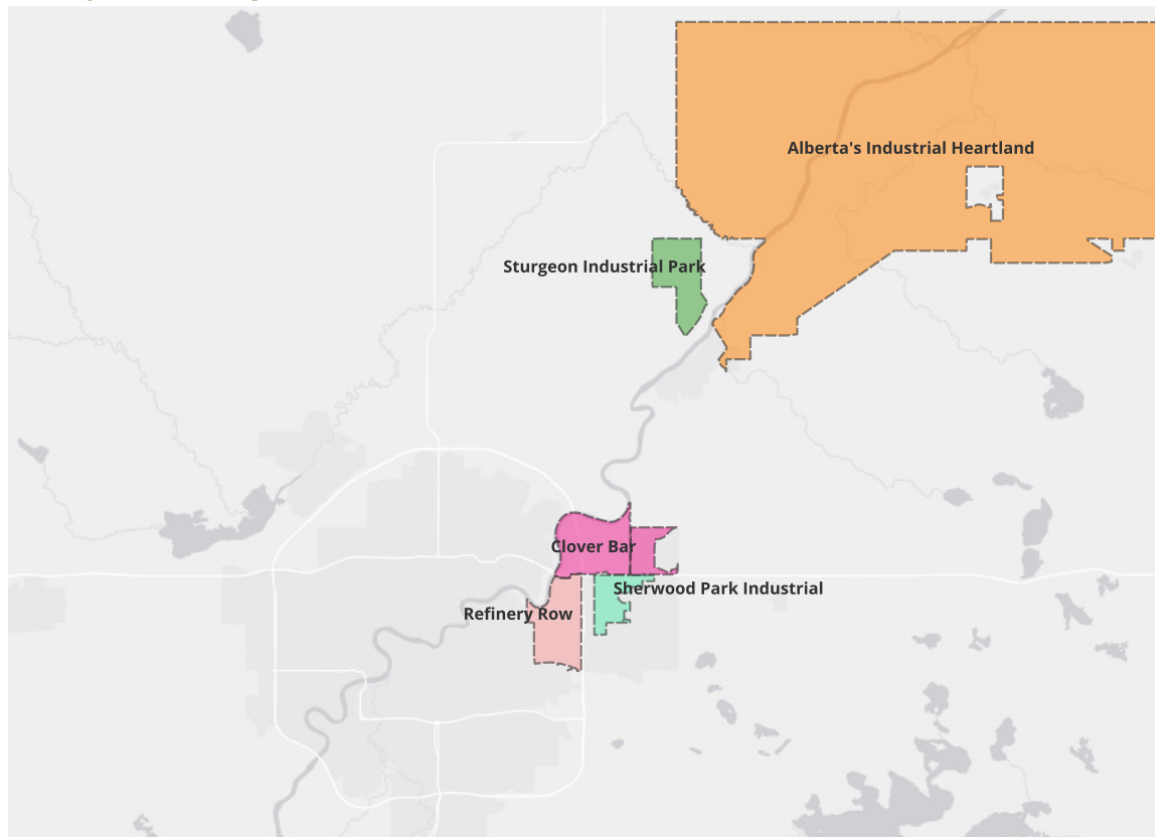
For the purposes of this work, the Study Area will be referred to as the Northeast Edmonton Region which includes the boundaries of the major employment areas within the northeast of the Edmonton Metropolitan Region.

The major employment areas are defined through the Edmonton Metropolitan Regional Growth Plan.⁶ The employment areas include the following:

- ▶ Alberta's Industrial Heartland
- ▶ Clover Bar
- ▶ Sherwood Park Industrial
- ▶ Refinery Row (also known as Strathcona Industrial Area)
- ▶ Sturgeon Industrial Park

The Study Area is depicted in the map on the following page.

Study Area Map



⁶ Schedule 3A - Edmonton Metropolitan Region Growth Plan, January 2020.

Employment Profile

This section of the report presents a current snapshot of employment in the Study Area.

CURRENT EMPLOYMENT

Employment information about the Study Area has been estimated for 2023 by 2 digit NAICS industry.

JOBS BY INDUSTRY (BASE YEAR)

It is estimated that in 2023 there are over 61,000 jobs in the Study Area, which represents approximately 8% of employment in the Edmonton Region.

Base Year Total Study Area Jobs By Industry (2 Digit NAICS)⁷

Industry (NAICS)	# of jobs	% of jobs
11 Agriculture, forestry, fishing and hunting	902	2.0%
21 Mining, quarrying, and oil and gas extraction	3,339	5.0%
22 Utilities	750	1.0%
23 Construction	9,131	15.0%
31-33 Manufacturing	8,350	14.0%
41 Wholesale trade	3,465	6.0%
44-45 Retail trade	5,621	9.0%
48-49 Transportation and warehousing	4,119	7.0%
51 Information and cultural industries	389	1.0%
52 Finance and insurance	1,319	2.0%
53 Real estate and rental and leasing	959	2.0%
54 Professional, scientific and technical services	4,085	7.0%
55 Management of companies and enterprises	180	0.0%
56 Administrative and support, waste management and remediation services	2,282	4.0%
61 Educational services	1,648	3.0%

⁷ North America Industrial Classification System (NAICS) is a standardized way of classifying employment establishments for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>

Industry (NAICS)	# of jobs	% of jobs
62 Health care and social assistance	4,804	8.0%
71 Arts, entertainment and recreation	681	1.0%
72 Accommodation and food services	2,263	4.0%
81 Other services (except public administration)	2,350	4.0%
91 Public administration	3,953	7.0%
Total	60,590	100%

Note: Data reflects estimated 2023 employment for the Study Area.

It is estimated that there are approximately 25,000 jobs in industries of interest in the Study Area. The industries of interest for the purposes of this analysis include those industries largely captured through the employer survey. These industries include:⁸

- ▶ Mining, quarrying and oil and gas extraction
- ▶ Construction
- ▶ Manufacturing
- ▶ Transportation and warehousing

Base Year Study Area Jobs By Selected Industry (2 Digit NAICS)⁹

Industry (NAICS)	# of jobs	% of Study Area jobs
21 Mining, quarrying, and oil and gas extraction	3,399	5.0%
23 Construction	9,302	15.0%
31-33 Manufacturing	8,621	14.0%
48-49 Transportation and warehousing	4,222	7.0%
Total	25,544	41%

Note: Data reflects estimated 2023 employment for the Study Area. The previous Regional Labour Profile did not include the Construction industry.

⁹ North America Industrial Classification System (NAICS) is a standardized way of classifying employment establishments for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>

JOBS BY OCCUPATION

Employment by occupation for the Study Area has been estimated for 2023 by 4 digit NOC. The top 20 jobs by occupation represent 58% of total employment across the selected industries.

Base Year Study Area Top 20 Jobs by Occupation (4 Digit NOC)¹⁰

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
7330	Transport truck and transit drivers	1,687	6.8%
7210	Machining, metal forming, shaping and erecting trades	1,403	5.6%
7511	Trades helpers and labourers	1,345	5.4%
7001	Managers in construction and facility operation and maintenance	973	3.9%
7220	Technical electrical trades and electrical power line and telecommunications workers	952	3.8%
9510	Labourers in processing, manufacturing and utilities	747	3.0%
7230	Plumbers, pipefitters and gas fitters	742	3.0%
7240	Machinery and transportation equipment mechanics (except motor vehicles)	676	2.7%
7231	Carpenters and cabinetmakers	679	2.7%
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	666	2.7%
7510	Longshore workers and material handlers	624	2.5%
7340	Operators, drillers and blasters	566	2.3%
9001	Managers in manufacturing and utilities	495	2.0%
1440	Supply chain logistics, tracking and scheduling coordination occupations	510	2.0%
7520	Taxi, personal service and delivery service drivers	454	1.8%
1310	Administrative, property and payroll officers	427	1.7%
2230	Technical occupations in civil, mechanical and industrial engineering	412	1.7%

¹⁰The 2021 National Occupation Classification (NOC) is a standardized system for classifying jobs for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force. <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1322554>

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
7320	Building maintenance installers, servicers and repairers	400	1.6%
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	394	1.6%
9310	Central control and process operators in processing and manufacturing	369	1.5%
Total		14,521	58.3%
Note: Data reflects estimated 2023 employment for the Study Area by NOC.			
Note: The NOC is based on the 2021 Statistics Canada NOC Code.			

The list of total employment by occupation for the Study Area has been estimated for 2023 by 4 digit NOC and is included in Appendix B.

TURNAROUND EMPLOYMENT

Employment and scheduling information about Study Area turnarounds is from the 2024 Employer Survey supplemented with data provided in the previous 2019 employer survey for companies that did not complete the 2024 survey or did not provide data on turnaround activities. Results were not scaled to be representative of the entire Study Area workforce, as when turnarounds are scheduled (and their resulting employment demand impacts) is at the discretion of each employer.

TURNAROUND JOBS BY TYPE

The turnaround scheduling and employment presented in this section is based on survey data provided by 16 employers in the 2024 Employer Survey (44% of total respondents)¹¹ and 11 employers in the 2019 Employer Survey. Turnaround data from the 2019 Employer Survey was included to capture those companies in the Study Area that provided data in 2019 but did not complete the 2024 Employer Survey or did not provide responses to the questions on Turnaround.

Some employers reported that their turnarounds do not occur on a set schedule, suggesting a segment of turnaround employment demand in the region is unplanned and variable in nature. In addition to employers who participated in the survey, there are other employers in the Study Area whose turnaround employment information is not captured.¹² It is expected that the demand for turnaround workers is more acute at certain times than what is shown in the chart below. The demand for turnaround workers is therefore greater than what is represented in the survey results and other employers may increase demand for turnaround workers at peak times.

Employers reported the frequency and Quarter/Year for each of their scheduled turnarounds. Over a six year period between 2024-2029, a total of 136 turnaround events are anticipated, including:

¹¹ Three employers surveyed reported they do not have turnarounds due to the nature of their operations. Of the 16 employers, only 9 employers provided complete data to generate the turnaround schedule presented in the time series chart in this section.

¹² Turnaround employment was not scaled because it is difficult to project the experience of some Study Area employers to others, because they all have unique processes - scaling in this case would likely be too speculative.

- ▶ Twenty-three (23) Type 1 turnarounds,
- ▶ Seven (7) Type 2 turnarounds, and
- ▶ Two (2) Type 3 turnarounds.¹³

There are numerous quarters where multiple employers have scheduled turnarounds at the same time, requiring a total sum of 500 workers or more. Quarters 1 and 4 of each year are a particularly high demand time for workers for scheduled turnarounds in the Study Area. This is true even without the employers not captured by the survey.

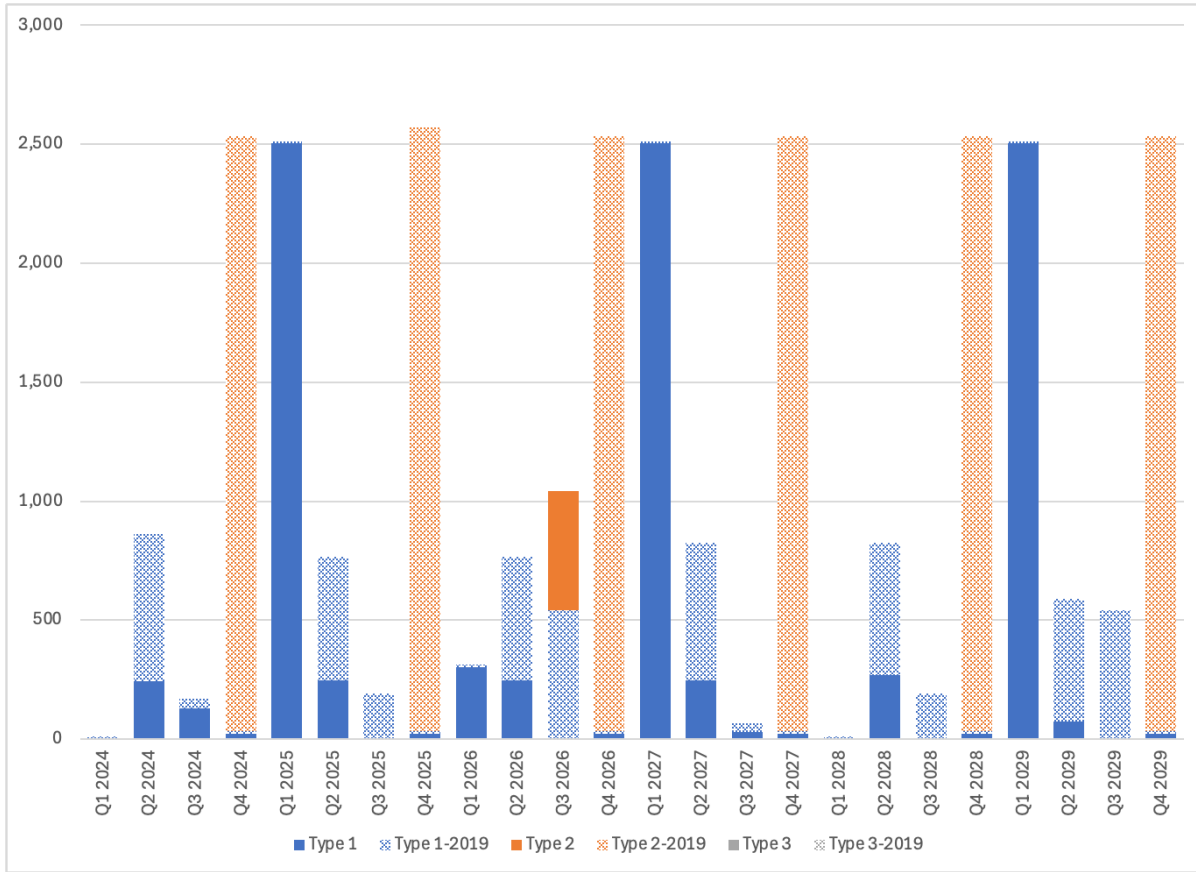
The Type 1 turnaround event occurring every 2 years in Quarter 1 and the Type 2 turnaround event occurring annually in Quarter 4 are each undertaken by a single employer, and both employers require an estimated 2,500 turnaround workers. If other employers schedule their turnaround during this time period, there is a higher likelihood temporary worker shortages would occur.

Some examples of the turnaround schedules employers reported are below:

- ▶ “We have at least one turnaround event per year. These are outages that last longer than 30 days. We also have outages that last up to 30 days.” - Manufacturing employer
- ▶ “Our major Turnaround is every 8 years. We have different units that have intermittent turnarounds and pit-stops.” - Manufacturing employer
- ▶ “We provide services to the oil & gas industry who have turnaround schedules - we don't have one at our location as we are not a plant.” - Mining, quarrying, and oil and gas extraction employer

¹³ Turnaround types are not defined by employers in a standard way. Generally, for the purposes of the survey results, Type 1 is occurring most frequently and Type 3 least frequently.

Next Turnaround Jobs By Type



Survey respondents who provided information on turnarounds include ten companies situated in Fort Saskatchewan, six companies in Strathcona County, six companies in Sturgeon County, and one in Lamont County,

The top turnaround occupations reported by employers in the 2024 survey are listed on the following page.

Top 10 Next Turnaround Occupations¹⁴

NOC Code	Occupation Title	# of turnaround workers	% of turnaround workers
72400	Construction millwrights and industrial mechanics	1,580	61.1%
13201	Production and transportation logistics coordinators	300	11.6%
93101	Central control and process operators, petroleum, gas and chemical processing	239	9.2%
85111	Oil and gas drilling, servicing and related labourers	100	3.9%
21221	Business systems specialists	80	3.1%
12013	Supervisors, supply chain, tracking and scheduling coordination occupations	55	2.1%
21321	Industrial and manufacturing engineers	46	1.8%
72201	Industrial electricians	34	1.3%
72301	Steamfitters, pipefitters and sprinkler system installers	33	1.3%
72106	Welders and related machine operators	24	0.9%
94140	Process control and machine operators, food and beverage processing	24	0.9%
	Other occupations	70	2.7%
Total		2,585	100%
Note: 8 employers provided a response for this question.			

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings

- Coordinating turnaround schedules amongst regional employers may help to alleviate short term workforce shortages.

FUTURE EMPLOYMENT

An employment forecast is presented below for the period 2023-2028. Employment information about the Study Area has been estimated by 2 digit NAICS industry. Over this period there is an estimated 8,200 growth in employment within the Study Area. Of the total employment growth, the growth in the selected industries related to the Northeast Edmonton Region is 3,940. This includes growth in the following industries: Mining, quarrying and oil and gas extraction (+518), Construction (+1,115), Manufacturing (+1,773) and Transportation and warehousing (+534).

¹⁴ Based on 2024 Employer Survey data and includes all turnaround types.

Total Study Area Jobs By Industry 2023-2028 (2 Digit NAICS)¹⁵

Industry (NAICS)	2023 # of Jobs	2028 # of Jobs	Change in Jobs	% of Total Jobs
11 Agriculture, forestry, fishing and hunting	902	874	(28)	1.3%
21 Mining, quarrying, and oil and gas extraction	3,339	3,857	518	5.6%
22 Utilities	750	845	95	1.2%
23 Construction	9,131	10,246	1,115	14.9%
31-33 Manufacturing	8,350	10,122	1,773	14.7%
41 Wholesale trade	3,465	3,788	323	5.5%
44-45 Retail trade	5,621	6,481	861	9.4%
48-49 Transportation and warehousing	4,119	4,653	534	6.8%
51 Information and cultural industries	389	428	38	0.6%
52 Finance and insurance	1,319	1,566	247	2.3%
53 Real estate and rental and leasing	959	1,075	116	1.6%
54 Professional, scientific and technical services	4,085	4,555	470	6.6%
55 Management of companies and enterprises	180	198	18	0.3%
56 Administrative and support, waste management and remediation services	2,282	2,536	254	3.7%
61 Educational services	1,648	1,898	250	2.8%
62 Health care and social assistance	4,804	5,127	323	7.4%

¹⁵ North America Industrial Classification System (NAICS) is a standardized way of classifying employment establishments for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>

Industry (NAICS)	2023 # of Jobs	2028 # of Jobs	Change in Jobs	% of Total Jobs
71 Arts, entertainment and recreation	681	762	82	1.1%
72 Accommodation and food services	2,263	2,683	420	3.9%
81 Other services (except public administration)	2,350	2,661	311	3.9%
91 Public administration	3,953	4,486	533	6.5%
Total	60,590	68,841	8,253	100%

Note: Data reflects estimated 2023 employment and forecast for the period 2024-2028 for the Study Area.

An employment forecast by occupation has been estimated for the period 2023-2028 by 4 digit NOC. The Top 20 occupations in 2028 are presented below. These occupations represent 2,211 new jobs by 2028.

Top 20 Jobs by Occupation (4 Digit NOC)¹⁶¹⁷

NOC Code	Occupation Title	2023 # of Jobs	2028 # of Jobs	Change in Jobs
7330	Transport truck and transit drivers	1,687	1,917	230
7210	Machining, metal forming, shaping and erecting trades	1,403	1,660	257
7511	Trades helpers and labourers	1,345	1,521	176
7001	Managers in construction and facility operation and maintenance	973	1,100	128
7220	Technical electrical trades and electrical power line and telecommunications workers	952	1,084	132
9510	Labourers in processing, manufacturing and utilities	747	900	153
7230	Plumbers, pipefitters and gas fitters	742	844	102

¹⁶ National Occupation Classification (NOC) is a standardized system for classifying jobs for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force. <http://noc.esdc.gc.ca/English/NOC/Welcome.aspx?ver=16>

¹⁷ Top 20 Occupations refers to the occupations with the largest employment in 2028 within the Study Area.

NOC Code	Occupation Title	2023		
		# of Jobs	2028 # of Jobs	Change in Jobs
7240	Machinery and transportation equipment mechanics (except motor vehicles)	676	782	106
7231	Carpenters and cabinetmakers	679	770	91
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	666	758	93
7510	Longshore workers and material handlers	624	725	102
7340	Operators, drillers and blasters	566	647	81
9001	Managers in manufacturing and utilities	495	598	103
1440	Supply chain logistics, tracking and scheduling coordination occupations	510	597	87
7520	Taxi, personal service and delivery service drivers	454	516	61
1310	Administrative, property and payroll officers	427	493	66
2230	Technical occupations in civil, mechanical and industrial engineering	412	477	65
7320	Building maintenance installers, servicers and repairers	400	460	60
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	394	447	53
9310	Central control and process operators in processing and manufacturing	369	435	65
Total		14,521	16,731	2,211
Note: Data is based on forecast of employment.				
Note: The NOC is based on the 2021 Statistics Canada NOC Code.				

WAGE / SALARY

The table on the following page displays the top 20 occupations projected to grow within the Study Area, the average hourly wages for both starting/entry level and higher end positions in each occupation as reported by the employer survey, and the average hourly wages as reported by the 2021 Alberta Wage and Salary Survey¹⁸.

Of the occupations for which wages were reported in the employer survey, more than half (6 of 10) in the starting/entry level category were higher than those reported by the 2021 Alberta Wage and Salary Survey for both the Edmonton CMA and province as a whole.¹⁹

There are, however, some limitations to the wage-related survey data presented in the table below. The survey data represents a relatively small sample of employers, with fewer than ten employers providing wage responses for most occupations. As well, the survey data is entirely self-reported by employers, meaning that there could be some degree of ambiguity regarding the specific wages offered for each occupation; and potentially some ambiguity in the NOC code categorization of occupations. While the survey responses provide valuable insight into the wages offered by employers in the Study Area, they are not necessarily perfectly comparable to those average wages reported for the Edmonton CMA and province.

¹⁸ <https://open.alberta.ca/dataset/676a7320-6322-43b6-9838-e46dfe38663e/resource/17e981ac-c3de-47e3-a327-4b2e056ac166/download/lbr-2021-awss-overview.pdf>.

¹⁹ The Edmonton CMA does not include Lamont County.

Selected Average Starting and Upper End Hourly Wages (2021)²⁰

NOC Code	Occupation Title	Starting/Entry Average			Upper End Average		
		2024 Survey	Edm CMA	AB	2024 Survey	Edm CMA	AB
7330	Transport truck and transit drivers	30.00	24.34	25.28	38.25	32.14	32.74
7210	Machining, metal forming, shaping and erecting trades	46.50	30.12	34.10	106.00	39.03	41.72
7511	Trades helpers and labourers		20.03	20.43		32.81	30.44
7001	Managers in construction and facility operation and maintenance	46.50	40.35	41.34	106.00	61.54	59.47
7220	Technical electrical trades and electrical power line and telecommunications workers	52.29	30.29	33.11	52.29	42.67	44.97
9510	Labourers in processing, manufacturing and utilities	23.23		23.82	29.30		31.14
7230	Plumbers, pipefitters and gas fitters	25.58		37.72	46.50	45.19	44.34
7240	Machinery and transportation equipment mechanics (except motor vehicles)	38.39	45.48	41.04	52.61	52.66	46.78
7231	Carpenters and cabinetmakers		31.16	31.03		39.47	37.65
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers						
7510	Longshore workers and material handlers		18.88	18.38		31.47	25.70
7340	Operators, drillers and blasters		27.17	28.29		40.38	40.24
9001	Managers in manufacturing and utilities		47.68	43.70		74.36	67.59

²⁰ Based on the 2021 Alberta Wage and Salary Survey

NOC Code	Occupation Title	Starting/Entry Average			Upper End Average		
		2024 Survey	Edm CMA	AB	2024 Survey	Edm CMA	AB
1440	Supply chain logistics, tracking and scheduling coordination occupations	36.00	18.24	18.27	38.00	28.90	27.18
7520	Taxi, personal service and delivery service drivers						
1310	Administrative, property and payroll officers		25.46	25.89		39.79	40.52
2230	Technical occupations in civil, mechanical and industrial engineering	36.34	30.03	35.89	61.00	56.35	54.06
7320	Building maintenance installers, servicers and repairers		19.25	20.15		28.93	28.83
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators						
9310	Central control and process operators in processing and manufacturing	40.25	40.10	39.46	56.26	65.68	59.57

REGIONAL WORKFORCE

This section provides an overview of selected labour market information for the Northeast Edmonton Region. The purpose of this analysis is to gain insight into the workforce of the Region and identify key labour market findings. Some key themes to consider in the review of the data include the following:

- ▶ The Statistics Canada labour force data covers a period 2016 to 2021, over which there was a global COVID-19 pandemic. The pandemic caused significant disruptions across all sectors of the economy, leading to notable changes in the labor force by industry.
- ▶ During this period, the labour force participation rate declined in all municipalities including for the Edmonton CMA.
- ▶ The COVID-19 pandemic had a profound impact on unemployment rates, causing unprecedented spikes and affecting various sectors differently. Post pandemic there was a gradual recovery period, which varies by sector, leading to partial rebound in employment levels in sectors.
- ▶ Post pandemic, the recovery has been uneven, with certain industries and demographic groups continuing to face lower participation rates and higher unemployment rates.
- ▶ A shift continues to occur in employment patterns with a greater portion of employer workers working remotely and an increased focus on upskilling the workforce to adapt to changing market demands.

The following section outlines a comparison of some of the key labour force statistics from 2016 to 2021. This includes the labour force statistics related to municipalities within close proximity to the Study Area within the Northeast Region. This includes the following:

- ▶ Edmonton CMA
- ▶ Edmonton
- ▶ Fort Saskatchewan
- ▶ Lamont County
- ▶ Strathcona County
- ▶ Sturgeon County

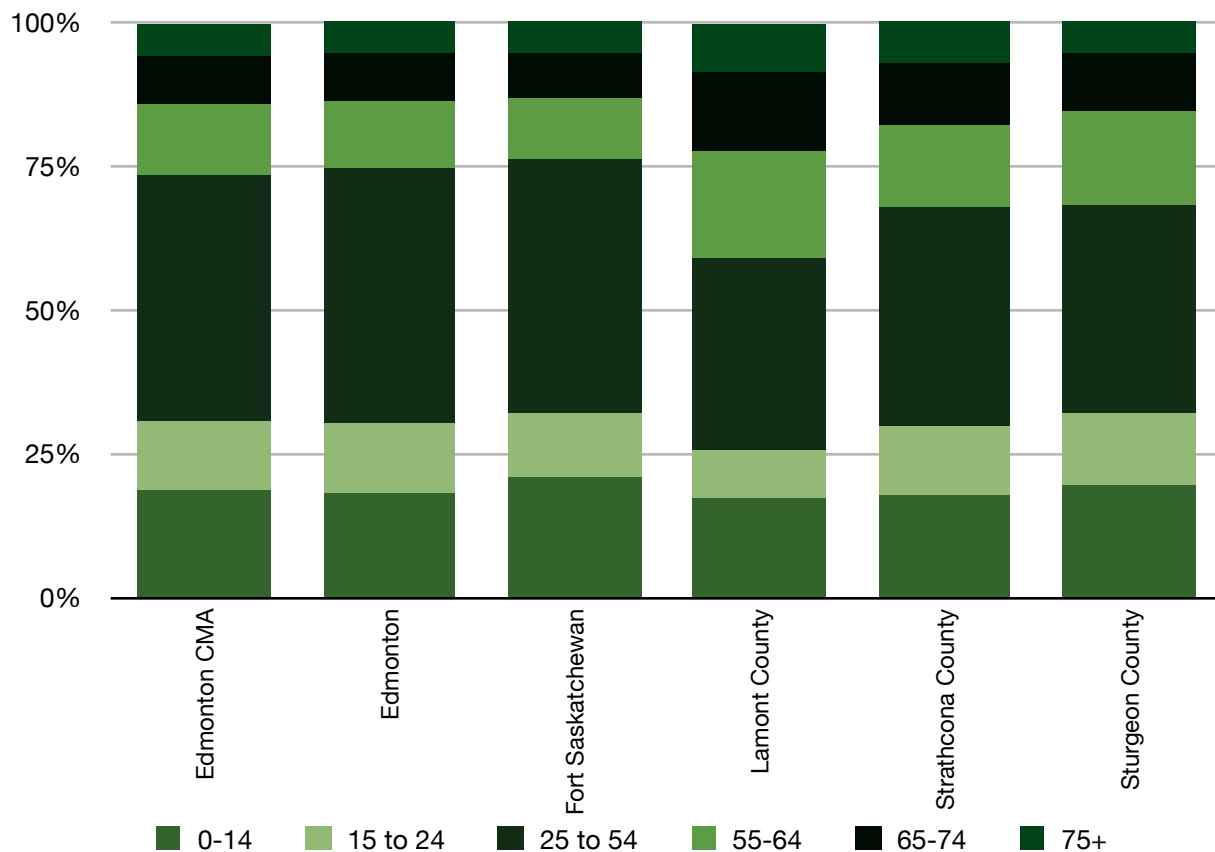
POPULATION (SELECTED MUNICIPALITIES)

In 2021, the Edmonton CMA population was approximately 1.42 million.²¹ The population within the municipalities in the Northeast Region are below:

- ▶ The 2021 Edmonton population was 1.01 million which comprises 71.3% of the Edmonton Region's population.
- ▶ The 2021 Fort Saskatchewan population was 27,090 which comprises 1.9% of the Edmonton Region's population.
- ▶ The 2021 Lamont County population was 3,760 which comprises 0.3% of the Edmonton Region's population.
- ▶ The 2021 Strathcona County population was 99,235 which comprises 7.0% of the Edmonton Region's population.
- ▶ The 2021 Sturgeon County population was 20,070 which comprises 1.4% of the Edmonton Region's population.

The population distribution by age within each municipality impacts the potential regional workforce.

Municipal Population Distribution by Age Cohort (2021) stack bar chart



Some notable differences in the age composition of each community include:

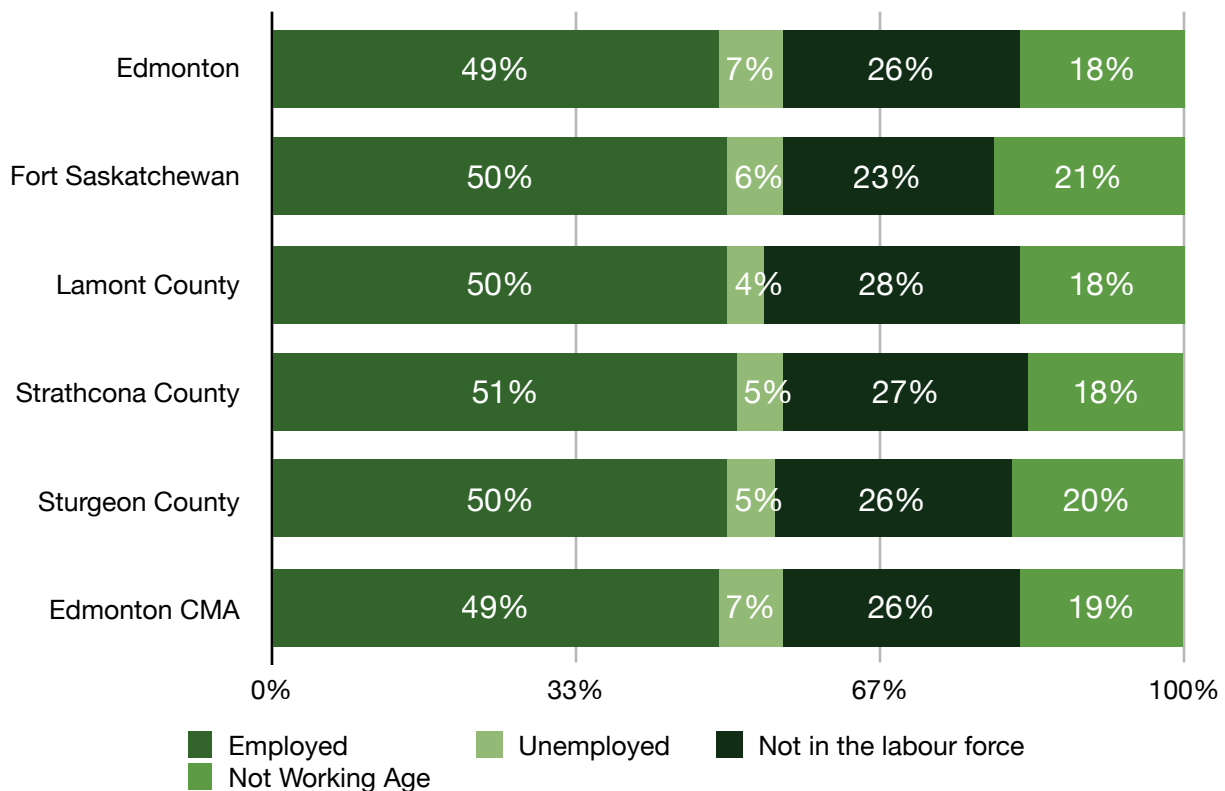
²¹ Statistics Canada 2021 Community Profile.

- ▶ In 2021, the median age of the population in the Edmonton CMA is 37.6. Fort Saskatchewan has the youngest population with a median age of 36, followed by Edmonton which has a median age of 36.8. Sturgeon County, Strathcona County and Lamont County have an older population with a median age of 41.2, 42.4, 47.6 respectively.
- ▶ Fort Saskatchewan and Sturgeon County have younger families, with the age composition of 0-14 year olds, respectively 20.8% and 19.3%, which is higher than the Edmonton CMA average (18.6%).
- ▶ Edmonton and Fort Saskatchewan have the highest proportion of 25 to 54 year olds (44%), which is higher than the Edmonton CMA average (42.9%). This represents a core of the working age population.
- ▶ The proportion of 75+ population is the highest in Lamont County (8.8%), followed by Strathcona County (7.1%). They both have a higher proportion of 75+ population than the Edmonton CMA (5.8%).

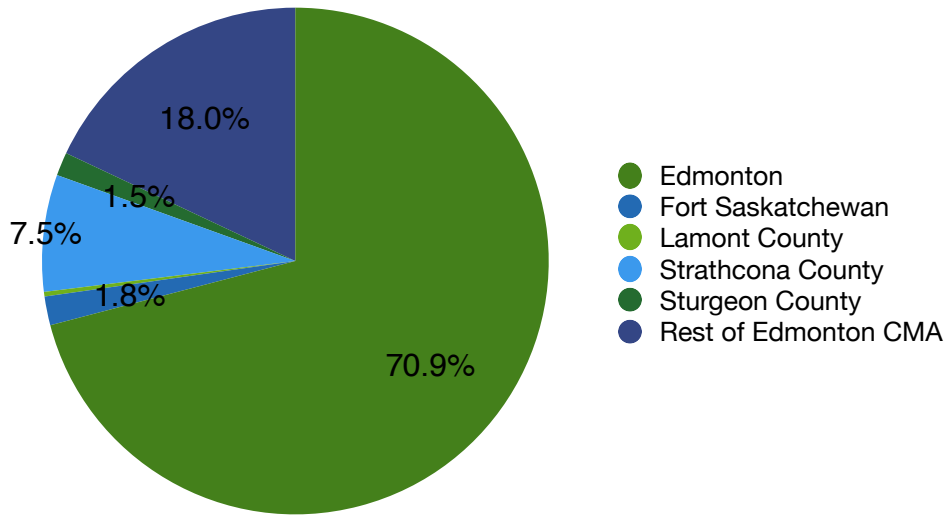
The Working Age Population is defined as those persons aged 15 years and older. The Labour Force is a subset of the Working Age Population, and is defined as persons having a job or business and unemployed persons who are available for work and are actively seeking employment. Those deemed to be Not In The Labour Force represent the rest of the Working Age Population.

As can be seen from the chart below, there is little variation in the proportion of the workforce by Employment Status across municipalities

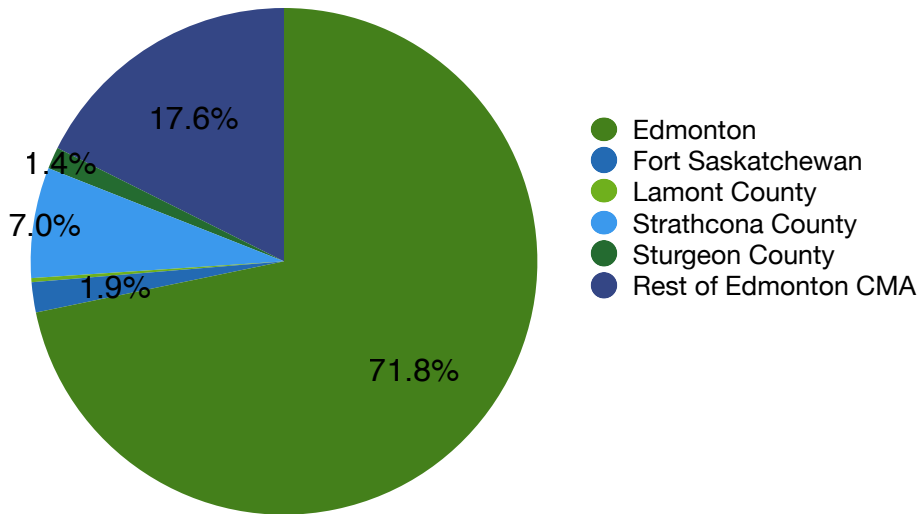
Edmonton CMA Population Components (2021)



Municipal Labour Force as proportion of Edmonton CMA % - 2016



Municipal Labour Force as proportion of Edmonton CMA % - 2021

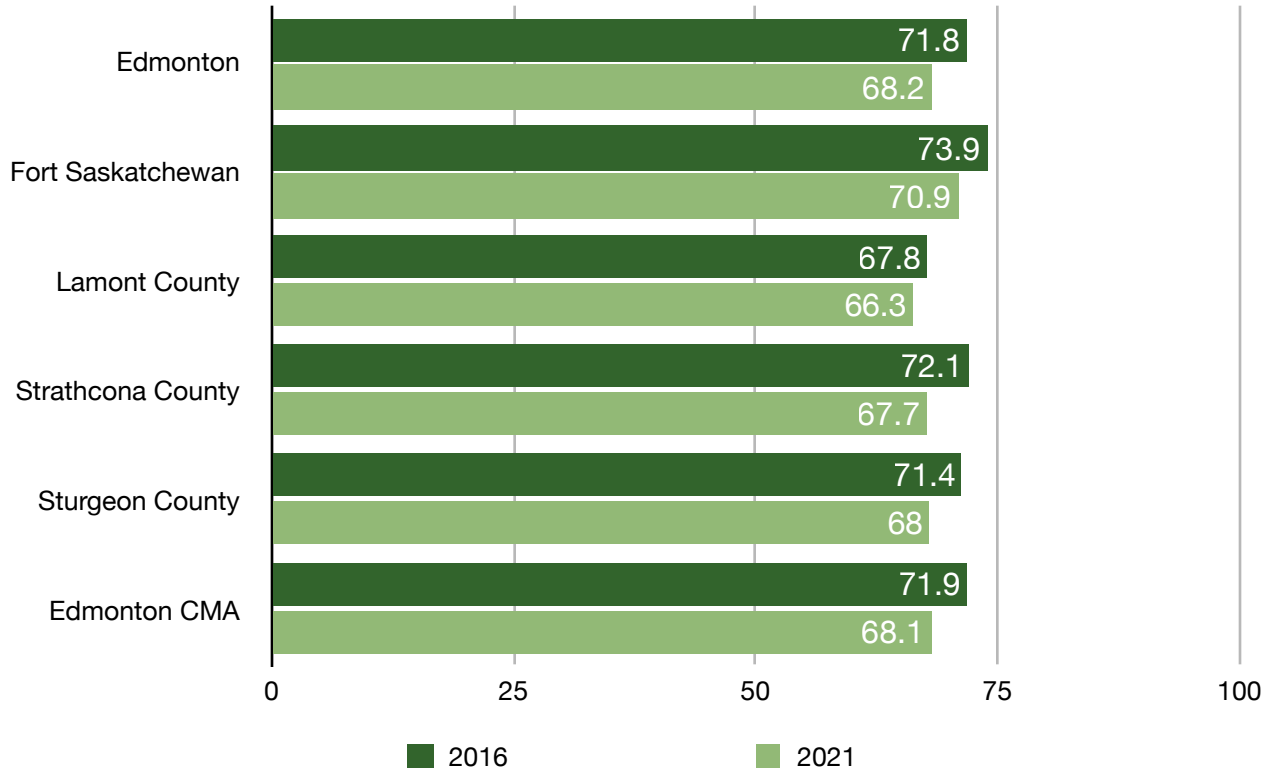


- ▶ Between 2016 and 2021, the Edmonton CMA labour force grew from 758,275 to 772,075, growth of 13,800 people in the labour force.
- ▶ The City of Edmonton and City of Fort Saskatchewan, both experienced growth from 2016 to 2021, respectively 16,285 and 905 people.
- ▶ Lamont County, Strathcona County and Sturgeon County all experienced a decline in labour force between 2016 and 2021. Lamont County labour force declined by 225, Strathcona County declined by 2,135 and Sturgeon County declined by 555.

LABOUR FORCE PARTICIPATION RATE

The labor force participation rate is a measure of the active portion of an economy's labor force. It represents the percentage of the working-age population (typically those aged 15 and over) that is either employed or actively seeking employment. The chart below provides the labour force participation rate by municipality.

Participation Rate by Municipality

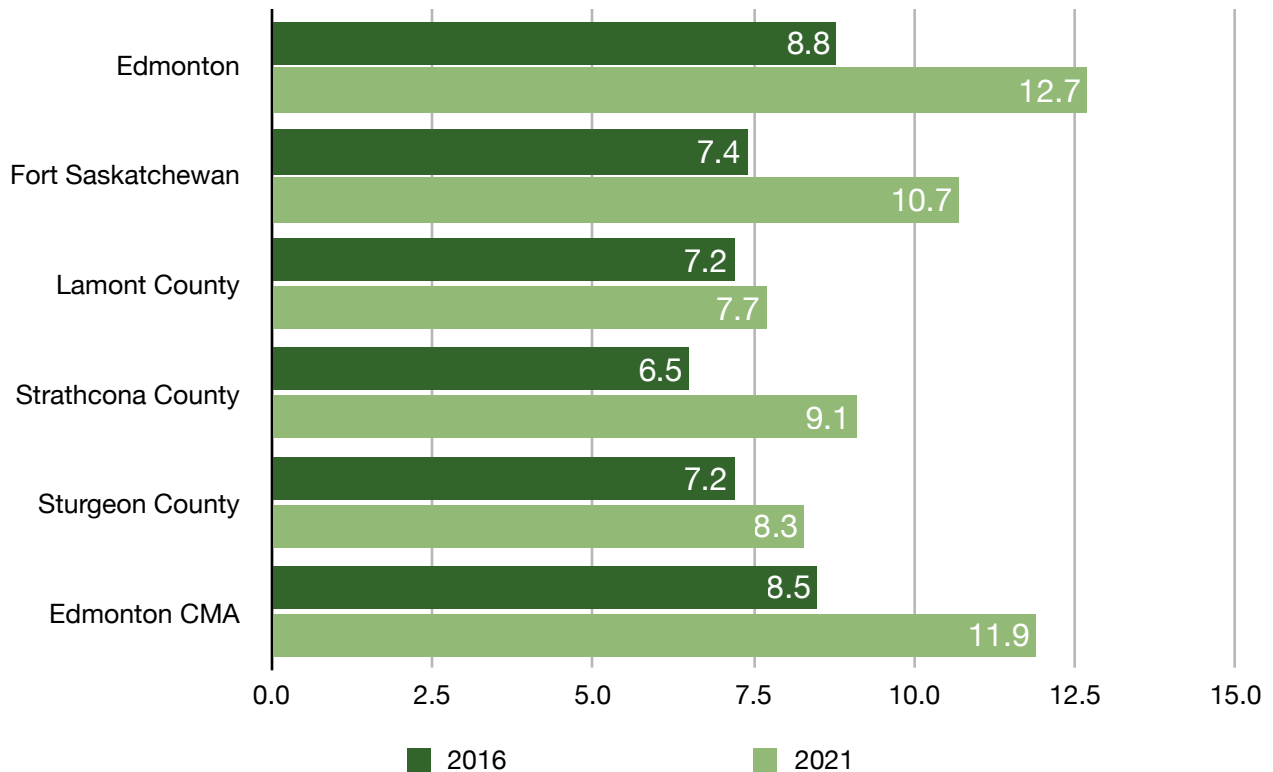


- ▶ The labour force participation rate declined in all municipalities including for the Edmonton CMA.
- ▶ In the Edmonton CMA, the labour force participation rate declined from 71.9 in 2016 to 68.1 in 2021.
- ▶ The City of Fort Saskatchewan had the highest labour force participation rate at 73.9 in 2016 and 70.9 in 2021.
- ▶ Strathcona County had the largest percentage decline in the labour force participation rate, 6.1%, from 72.1 to 67.7.

UNEMPLOYMENT RATE

The unemployment rate is a measure of the percentage of people in the labor force who are actively seeking work but are unable to find employment. It's an important indicator of the health of an economy and the functioning of the labor market.

Unemployment Rate by Municipality



- ▶ The unemployment rate increased in all municipalities, including the Edmonton CMA, which increased from 8.5 in 2016 to 11.9 in 2021.
- ▶ The City of Edmonton experienced a higher unemployment rate in comparison to the Edmonton CMA. In 2016, the unemployment rate was 8.8 and 12.7 in 2021.
- ▶ Between 2016 and 2021, Edmonton, Fort Saskatchewan, and Strathcona County all experienced an increase of 40% or greater in the unemployment rate.

TRANSPORTATION

Commuting distances from residential areas to employment areas within the Edmonton Metropolitan Region plays a crucial role in accessing the required workforce to support employment growth. Shorter commuting distances enhance workers' quality of life by reducing travel time and associated costs, leading to higher job satisfaction and productivity. Conversely, longer commutes can result in increased stress, reduced work-life balance, and lower overall well-being, which can affect employee performance and retention. Furthermore, the availability of efficient public transportation and infrastructure can significantly impact the ease with which workers can access employment areas, thereby influencing the labor market dynamics. Employers situated in locations with shorter and more manageable commuting distances are likely to have access to a larger, more diverse, and more readily available talent pool, which is essential for meeting the evolving demands of the metropolitan labor market.

Travel times during peak hours to employment areas within the Study Area have been calculated. Both 20 minute and 40 minute travel times have been calculated to major employment areas within the Study Area to identify a reasonable distance from within which workers may be available. The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

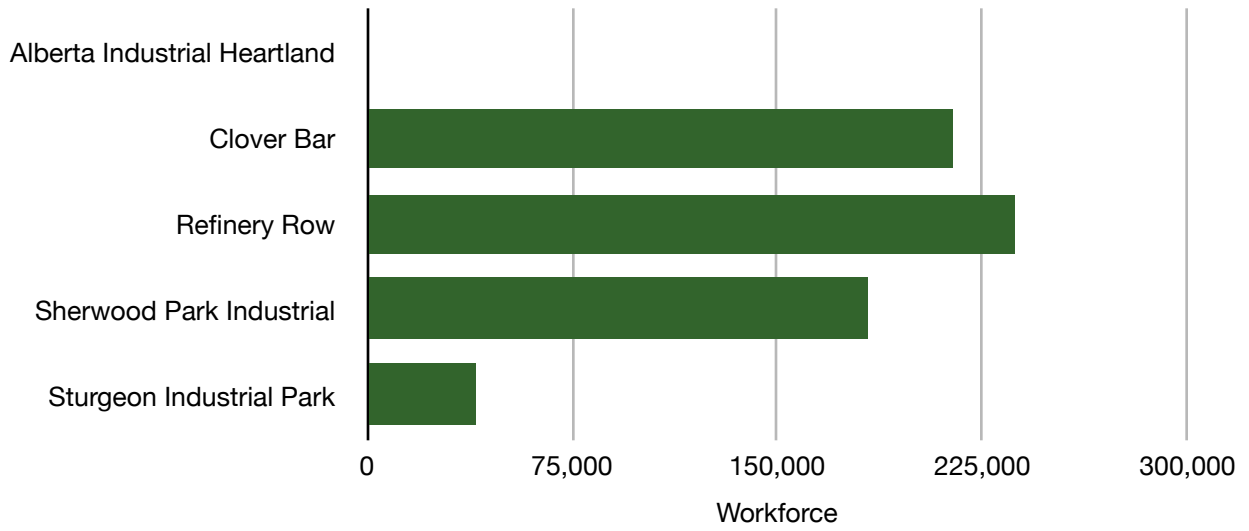
The workforce size within the 20 minute and 40 minute catchment area for each employment area has also been estimated. Below are some key findings.

- ▶ Alberta's Industrial Heartland has a very small workforce within the 20 minute catchment area. Within the 40 minute catchment area, Alberta's Industrial Heartland has almost 100,000 workforce.
- ▶ Clover Bar, Refinery Row, and Sherwood Park Industrial all have over 150,000 workforce within the 20 minute catchment area and over 1,000,000 workforce within the 40 minute catchment area.
- ▶ Sturgeon Industrial Park almost 40,000 workforce within the 20 minute catchment area and over 500,000 workforce within the 40 minute catchment area.

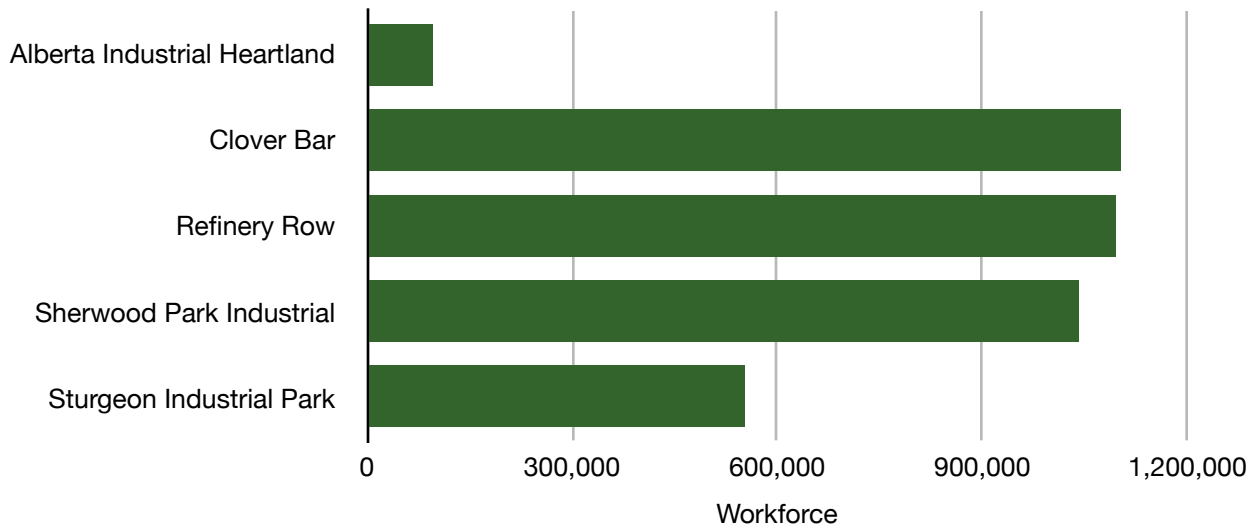
The following section provides a snapshot for each employment area including the 20 minute and 40 minute catchment areas and the location of workforce²² living within those catchment areas by municipality.

²² For the purposes of this analysis, the workforce refers to the population 15+.

Workforce Living within 20 Minute Catchment Area of Employment Areas

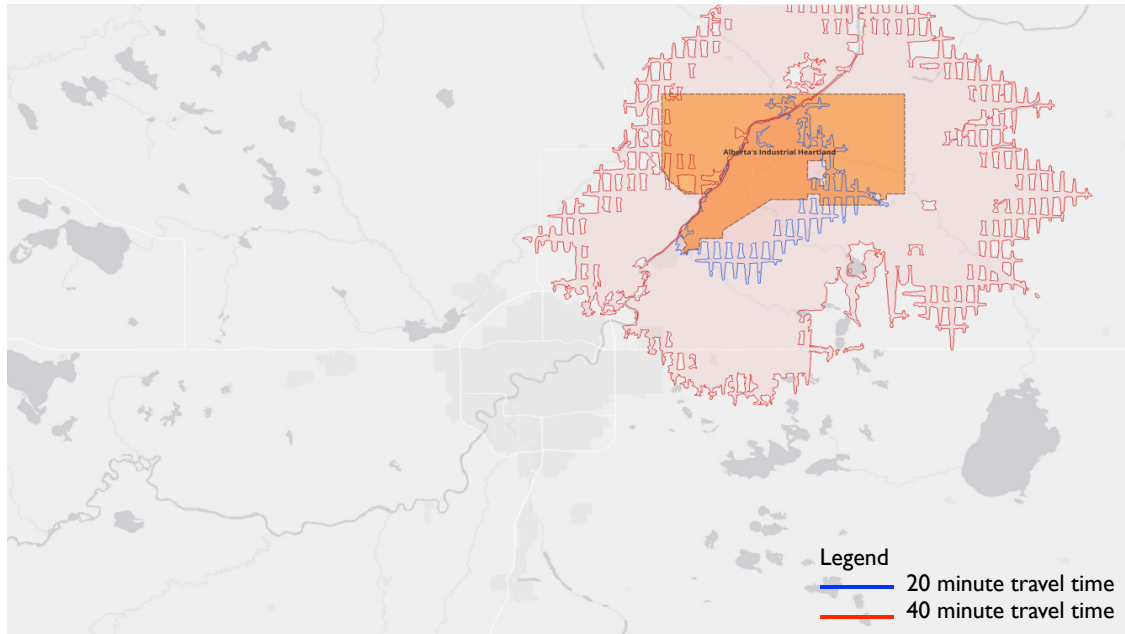


Workforce Living within 40 Minute Catchment Area of Employment Areas

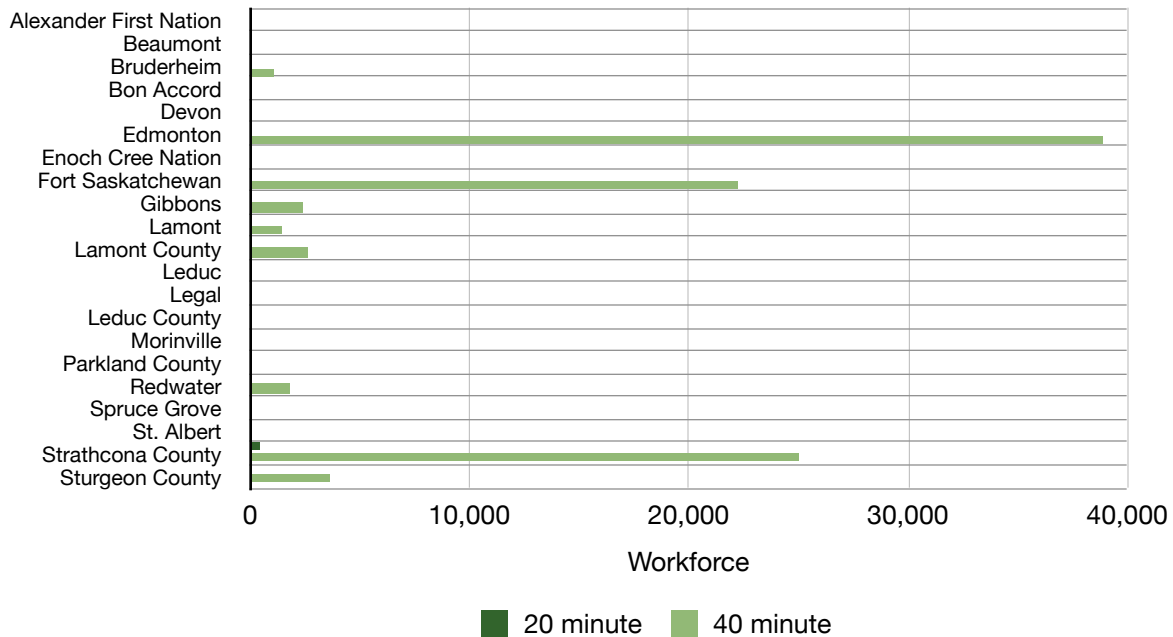


ALBERTA'S INDUSTRIAL HEARTLAND

Map of 20 Minute and 40 Minute Travel Time To Alberta's industrial Heartland²³



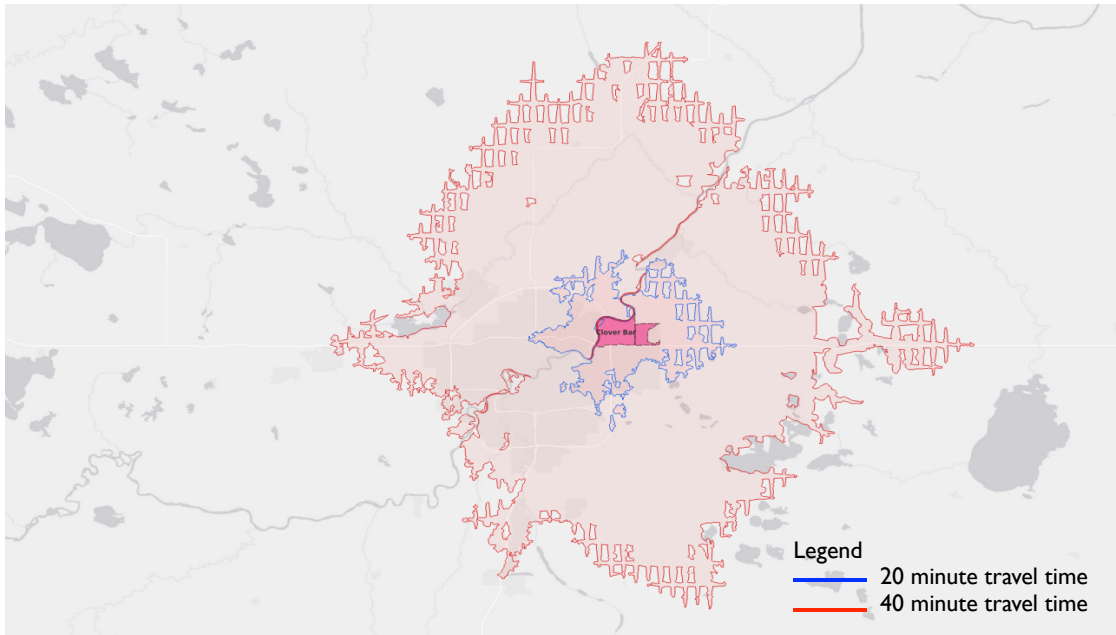
Location of Workforce 20 Minute and 40 Minute Catchment Area of Alberta's industrial Heartland



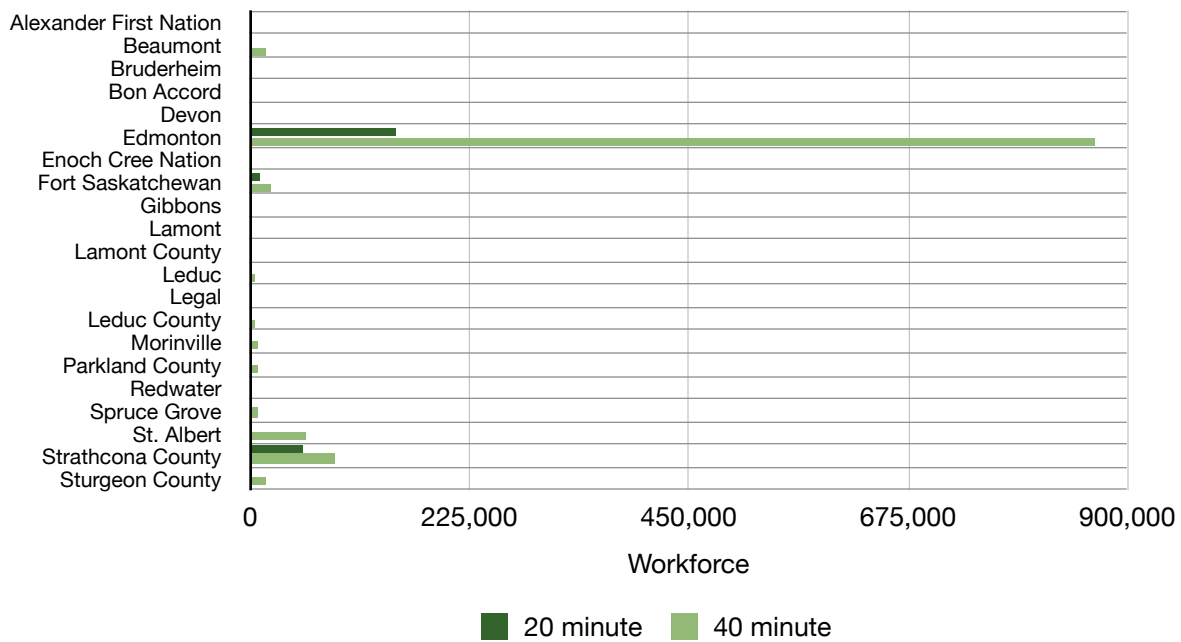
²³The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

CLOVER BAR

Map of 20 Minute and 40 Minute Travel Time To Clover Bar²⁴



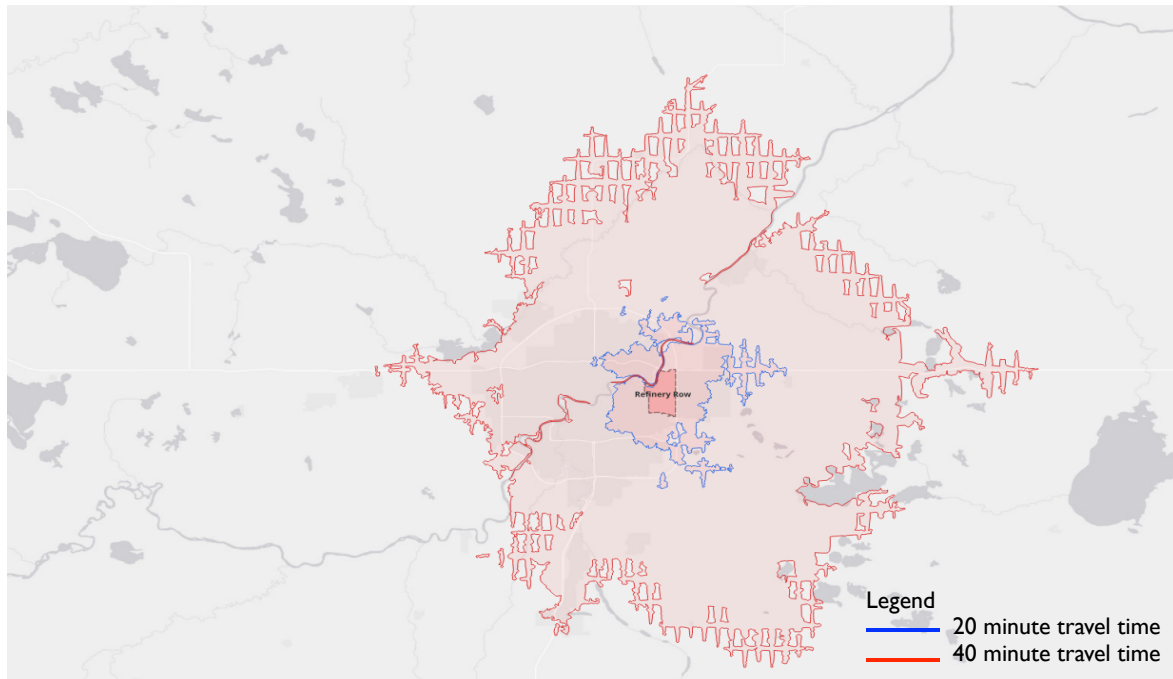
Workforce within 20 Minute and 40 Minute Catchment Area of Clover Bar



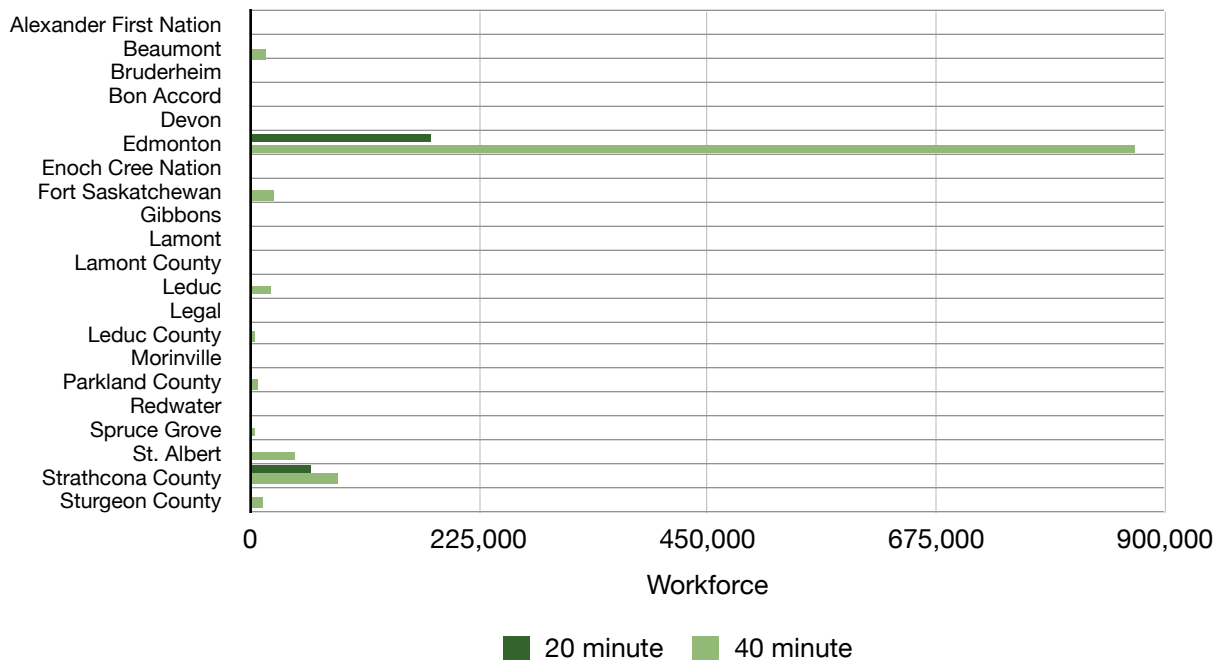
²⁴The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

REFINERY ROW/STRATHCONA INDUSTRIAL AREA

Map of 20 Minute and 40 Minute Travel Time To Refinery Row²⁵



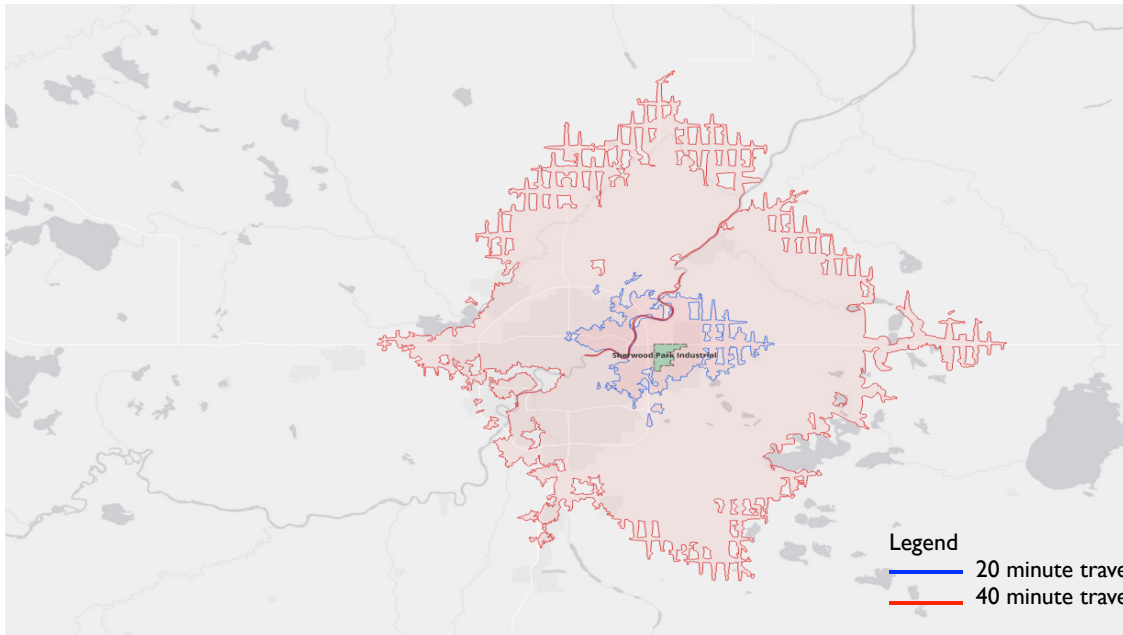
Workforce within 20 Minute and 40 Minute Catchment Area of Refinery Row



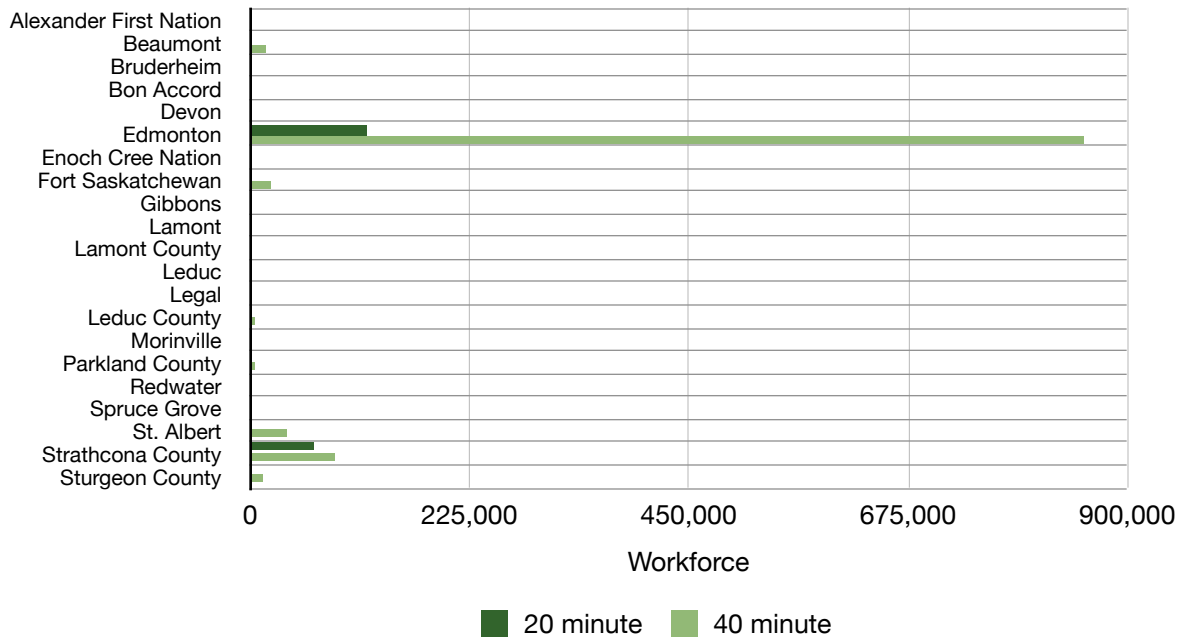
²⁵The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

SHERWOOD PARK INDUSTRIAL

Map of 20 Minute and 40 Minute Travel Time To Sherwood Park Industrial²⁶



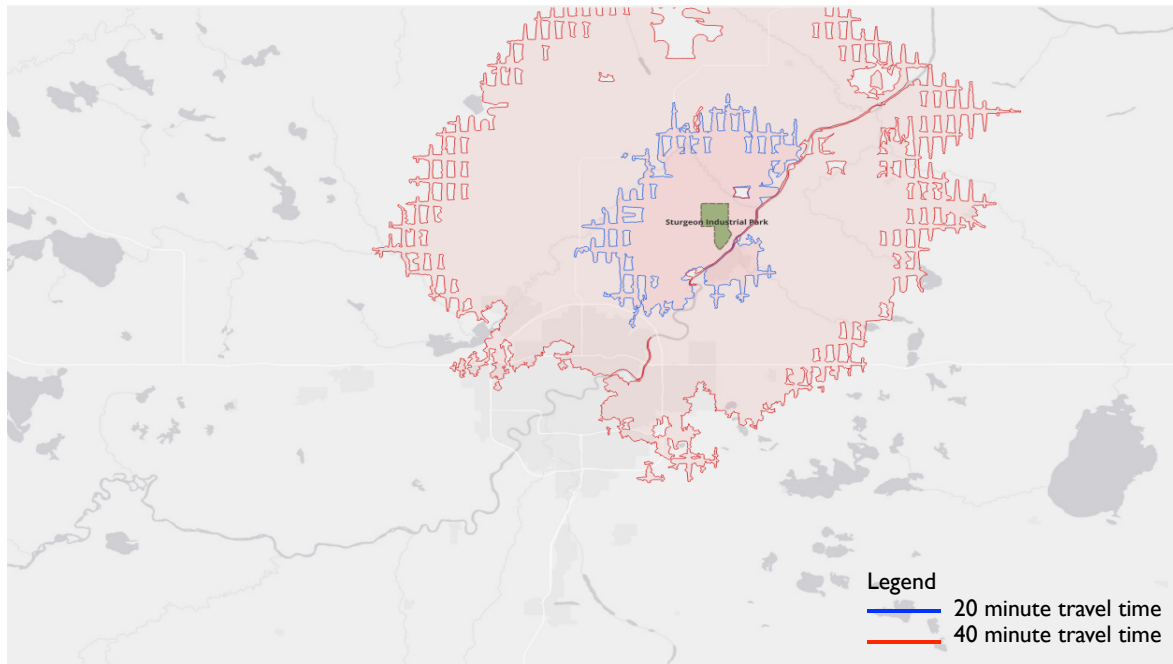
Workforce within 20 Minute and 40 Minute Catchment Area of Sherwood Park Industrial



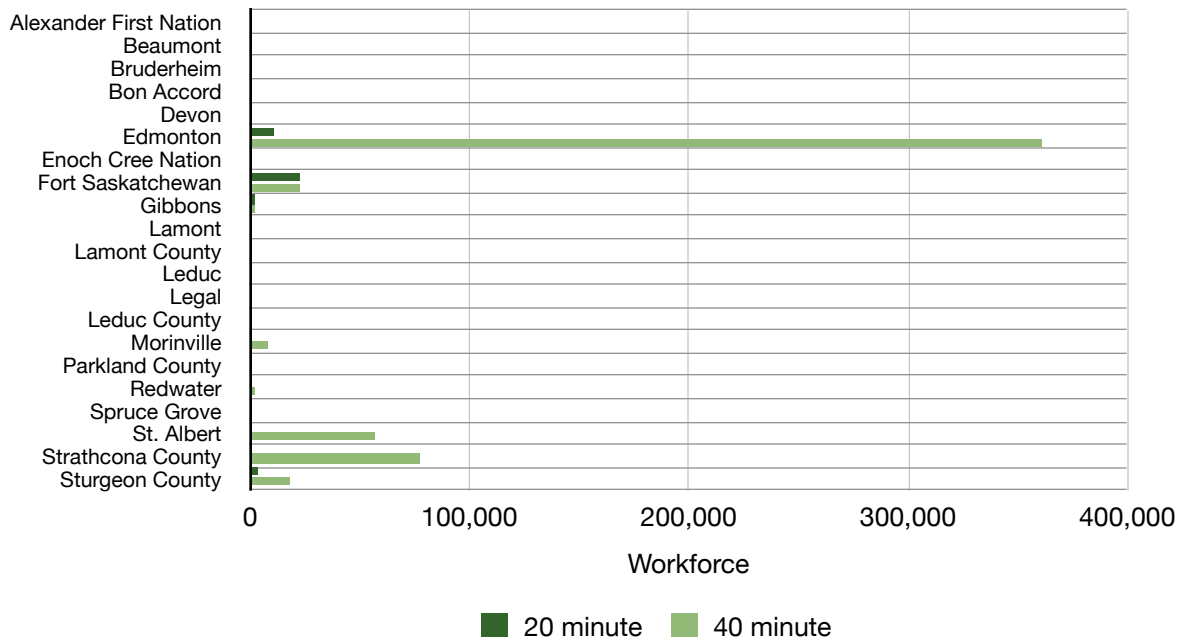
²⁶ The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

STURGEON INDUSTRIAL PARK

Map of 20 Minute and 40 Minute Travel Time To Sturgeon Industrial Park²⁷



Workforce within 20 Minute and 40 Minute Catchment Area of Sturgeon Industrial Park



²⁷The 20 minute and 40 minute catchment areas are based on the distance from the centre point of each employment area and traffic flow at 9:00 am. The defined catchment areas are approximations and are meant to reflect the general area of the potential workforce across the region.

Workforce Issues and Key Findings

This section of the report includes key findings related to identified workforce issues in the Study Area. The data provided on workforce issues is from the employer survey, as well as a forecast of employment was developed using Application Management Consulting Ltd.'s Labour Market Demand and Supply Model. Other sources of information are indicated in footnotes where applicable. Key findings have been noted in relation to the workforce issues that emerged during the employer survey and analysis process. Key findings are presented as general suggestions for use by regional stakeholders to establish a path towards addressing labour market needs in the region. They are not to be considered comprehensive of all solutions or representative of all stakeholders.

Several occupations were identified by employers surveyed as being difficult to fill, required to support expansion of operations and experiencing an increase in overtime hours. Of those occupations identified, the occupations that are also projected to experience shortages over the forecast period include the following:

- ▶ Employers surveyed identified occupations they expect to employ to support expansion of their operations. This includes the following occupations: NOC 72401 (Heavy-duty equipment mechanics) and 73300 (Transport truck drivers). Both these occupations are projected to continue to experience shortages over the forecast period.
- ▶ Employers surveyed identified difficult to fill occupations. Of the occupations identified these are the occupations that are projected to experience shortages over the forecast period: NOC 72106 (Welders and related machine operators), NOC 72201 (Industrial electricians), NOC 72301 (Steamfitters, pipe fitters, and sprinkler system installers), NOC 72400 (Construction millwrights and industrial mechanics), NOC 72401 (Heavy-duty mechanics), NOC 73300 (Transport truck drivers).
- ▶ Employers surveyed identified NOC 72401 (Heavy-duty equipment mechanics) as an occupation that experienced an increase in overtime hours. This occupation is also projected to continue to experience shortages over the forecast period.

WORKFORCE NEEDS AND SHORTAGES

NOC Code	Occupation Title	Change in Jobs (2023-2028)		Gap (Jobs)	Gap (Jobs)/Year
		In Study Area	Gap %		
7330	Transport truck and transit drivers	230	25.0%	57	11
7210	Machining, metal forming, shaping and erecting trades	257	33.0%	85	17
7511	Trades helpers and labourers	176	6.0%	11	2
7001	Managers in construction and facility operation and maintenance	128	7.0%	8	2

NOC Code	Occupation Title	Change in Jobs (2023-2028)		Gap (Jobs)	Gap (Jobs)/ Year
		In Study Area	Gap %		
7220	Technical electrical trades and electrical power line and telecommunications workers	132	51.0%	67	13
9510	Labourers in processing, manufacturing and utilities	153	0.0%	-	-
7230	Plumbers, pipefitters and gas fitters	102	47.0%	48	10
7240	Machinery and transportation equipment mechanics (except motor vehicles)	106	42.0%	44	9
7231	Carpenters and cabinetmakers	91	20.0%	18	4
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	93	60.0%	55	11
7510	Longshore workers and material handlers	102	32.0%	32	6
7340	Operators, drillers and blasters	81	0.0%	-	-
9001	Managers in manufacturing and utilities	103	3.0%	3	1
1440	Supply chain logistics, tracking and scheduling coordination occupations	87	0.0%	-	-
7520	Taxi, personal service and delivery service drivers	61	36.0%	22	4
1310	Administrative, property and payroll officers	66	0.0%	-	-
2230	Technical occupations in civil, mechanical and industrial engineering	65	20.0%	13	3
7320	Building maintenance installers, servicers and repairers	60	0.0%	-	-

NOC Code	Occupation Title	Change in Jobs (2023-2028)		Gap (Jobs)	Gap (Jobs)/Year
		In Study Area	Gap %		
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	53	63.0%	33	7
9310	Central control and process operators in processing and manufacturing	65	0.0%	-	-
Total		2,211		496	100

Note: Data is based on employment forecast by NOC and projection of gap(shortages) by occupation.

Based on an analysis of the demand for workers by occupation and the projected job seekers by occupation, a projection of the gap(shortage) in jobs has been provided for the top occupations within the selected industries within the Study Area.

- ▶ NOC 7330 (Transport Truck Drivers) includes the following 5-digit occupation(s): Transport truck drivers. This occupation is projected to continue to experience a shortage over the forecast period.
- ▶ NOC 7210 (Machining, metal forming, shaping and erecting trades) includes the following 5-digit occupation(s): Machinists and machining and tooling inspectors, Tool and die makers, Sheet metal workers, Boilermakers, Structural metal and plate work fabricators and fitters, Ironworkers and Welders and related machine operators. These occupations are projected to experience a shortage over the 5 year period, with a more acute shortage in the near term (1-3 years).
- ▶ NOC 7511 (Trades helpers and labourers) includes the following 5-digit occupation(s): Construction trades helpers and labourers, and Other trades helpers and labourers. These occupations are projected to experience a shortage which is anticipated to ease closer to the end of the forecast period.
- ▶ NOC 7001 (Managers in construction and facility operation and maintenance) includes the following 5-digit occupation(s): Construction managers. These occupations are projected to experience a shortage which is anticipated to ease closer to the end of the forecast period.
- ▶ NOC 7220 (Technical electrical trades and electrical power line and telecommunications workers) includes the following 5-digit occupation(s): Electricians, Industrial electricians, Power system electricians, Telecommunications line and cable installers and repairers, and Telecommunications equipment installation and cable television service technicians. These occupations are projected to experience a persistent shortage over the course of the forecast period.
- ▶ NOC 9510 (Labourers in processing, manufacturing and utilities) includes the following 5-digit occupation(s): Labourers in mineral and metal processing, Labourers in metal fabrication, Labourers in chemical products processing and utilities, Labourers in rubber and plastic products manufacturing, and Other labourers in processing, manufacturing and utilities. In aggregate this occupation group is projected to have enough available workforce to meet demand for workers over the forecast period. However, there is a shortage projected for Labourers in rubber and plastic products manufacturing towards to the end of the forecast period.

- ▶ NOC 7230 (Plumbers, pipe fitters and gas fitters) includes the following 5-digit occupation(s): Steamfitters, pipe fitters and sprinkler system installers, and Gas fitters. These occupations are projected to experience a persistent shortage over the course of the forecast period.
- ▶ NOC 7240 (Machinery and transportation equipment mechanics (except motor vehicles)) includes the following 5-digit occupation(s): Construction millwrights, and industrial mechanics, Heavy-duty equipment mechanics, and Machine fitters. These occupations are projected to experience a persistent shortage over the course of the forecast period.
- ▶ NOC 7231 (Carpenters and cabinetmakers) includes the following 5-digit occupation(s): Carpenters. It is projected that Carpenters will experience a shortage which begins to level off by the end of the forecast period.
- ▶ NOC 7201 (Contractors and supervisors, technical industrial, electrical and construction trades and related workers) includes the following 5-digit occupation(s): Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations, Contractors and supervisors, electrical trades and telecommunications occupations, Contractors and supervisors, pipefitting trades, Contractors and supervisors, carpentry trades, and Contractors and supervisors, other construction trades, installers, repairers and servicers. These occupations are projected to experience a persistent shortage over the entire forecast period.
- ▶ 7510 (Longshore workers and material handlers) includes the following 5-digit occupation(s): Material handlers. It is projected that Material handlers will experience a shortage over the course of the forecast period, with it being the most acute in the near term.
- ▶ 7340 (Operators, drillers and blasters) includes the following 5-digit occupation(s): Heavy equipment operators. Overall it is projected that this occupation group should not experience shortages, however may experience some shortages in the next 1-2 years.
- ▶ 9001 (Managers in manufacturing and utilities) this includes the following 5-digit occupation(s): Manufacturing managers. Overall it is projected that this occupation group will be fairly balanced in terms of demand and supply of workforce.
- ▶ 1440 (Supply chain logistics, tracking and scheduling coordination occupations) this includes the following 5-digit occupation(s): Shippers and receivers, Storekeepers and parts-persons, Production logistics workers, Purchasing and inventory control workers, Dispatchers, and Transportation route and crew schedulers. These occupations are projected to be fairly balanced over the forecast period in terms of demand and supply of workforce.
- ▶ 7520 (Taxi, personal service and delivery service drivers) this includes the following 5-digit occupation(s): Delivery service drivers and door-to-door distributors. It is projected that this occupation will experience some shortages over the course of the forecast period.
- ▶ 1310 (Administrative, property and payroll officers) this includes the following 5-digit occupation(s): Administrative officers, Property administrators, and Payroll administrators. Overall, these occupations are projected to be fairly balanced over the forecast period, with some shortages projected in the near term.
- ▶ 2230 (Technical occupations in civil, mechanical and industrial engineering) this includes the following 5-digit occupation(s): Non-destructive testers and inspectors, Civil engineering technologists and technicians, Mechanical engineering technologists and technicians, industrial engineering and manufacturing technologists and technicians, and Construction estimators. These occupations are projected to continue to experience shortages over the forecast period.
- ▶ 7320 (Building maintenance installers, servicers and repairers) this includes the following 5-digit occupation(s): General building maintenance worker and building superintendents. Overall it is projected that this occupation group will be fairly balanced in terms of demand and supply of workforce.

- ▶ 7202 (Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators) this includes the following 5-digit occupation(s): Contractors and supervisors, mechanic trades, Contractors and supervisors, heavy equipment operator crews, and Supervisors, railway transport operations. These occupations are projected to experience a persistent shortage over the forecast period.
- ▶ 9310 (Central control and process operators in processing and manufacturing) this includes the following 5-digit occupation(s): Central control and process operators, mineral and metal processing and Central control and process operators, petroleum, gas and chemical processing. These occupations are projected to be fairly balanced in terms of demand supply of workforce.

RECRUITMENT

Recruitment is the comprehensive process an organization undertakes to attract, evaluate, and select qualified candidates for job openings. This process includes advertising job positions, reviewing resumes to shortlist applicants, contacting and interviewing potential candidates, extending job offers to qualified candidates, and onboarding the new hires. The goal of recruitment is to ensure that the organization has the right talent to meet its operational needs and strategic objectives.

RECRUITMENT STRATEGIES

According to the Employer Survey, the top three successful recruitment strategies over the last 12 months included Career and classified websites (cited by 66% of employers who responded), followed by Word of mouth / employee referrals (62%) and Company website/internal postings (62%).

Other strategies that employers reported as successful were Social media (28%), Post-secondary institutions (21%), Walk-ins/unsolicited resumes (17%), Job fairs (17%), and Employment agencies (14%).

In addition to company websites, other internet resources like job boards, career websites and social media are increasingly popular recruitment tools for employers to reach a broader pool of candidates at a relatively low cost to the organization. The most frequently cited sites reported in the Employer survey include Indeed and LinkedIn.

Establishing a relationship with post-secondary institutions can also be an effective way to source qualified candidates, particularly for specific trades occupations that require technical skills and certifications. This can include participating in career fairs, offering internships / work placements, and campus recruiting. Employers in the survey commented that they have recruited at the province's major post-institutions including University of Alberta, University of Calgary, NAIT and SAIT.

Other successful recruitment tools could include:

- ▶ Engagement with industry associations and networks,
- ▶ Developing strong employer branding that showcases and highlights why your company is a great place to work at,
- ▶ Tailored online advertising to reach out to targetted demographics and skills sets (e.g. Google ads, LinkedIn ads),
- ▶ National and international recruiting with the use of video interviewing tools and remote work options,
- ▶ Pre-employment assessment tools that help evaluate candidates' skills personality and cultural fit.

- ▶ AI-powered tools that can automate part of the recruitment process such as candidate screening and interview scheduling

PAST AND FUTURE RECRUITING DIFFICULTIES

Just under half (45%) of employers surveyed said their organization has had difficulty recruiting qualified workers in the last 12 months. However, employers are anticipating that recruiting qualified workers will be less difficult in the future with only 38% anticipating difficulties in the next 12 months and 34% anticipating difficulties in the next 1 to 2 years.

The top responses provided by employers surveyed to hiring difficulties include:

- ▶ Increased recruiting efforts,
- ▶ Increased workload for current workers,
- ▶ Hired a less qualified applicant,
- ▶ Increase wages / benefits to attract more applicants,
- ▶ Hired contingent workers, such as contractors.

Employers expecting more recruitment difficulties in the future cited the following as some of their reasons:

- ▶ Competitive labour market with large petrochemical construction projects and lots of shutdowns in the Alberta Industrial Heartland Area,
- ▶ Tight labour market pushing wages and demands higher,
- ▶ Older mechanics reaching retirement and fewer workers interested in rural location,
- ▶ Lack of qualified workers in skilled trades.

Location in the Study Area affects the ability of some employers to recruit. Overall, just over a third of the employers (34%) cited that their location in the northeast Edmonton region impacts their ability to successfully recruit qualified workers primarily due to the lengthier commute from urban centers to the worksite locations.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings and recommendations:

- ▶ Having an online presence is key to successful hiring.
- ▶ Company websites and internal postings are a critical recruitment tool for employers. Develop a strong employer brand to showcase company values and culture and why your company is a great place to work.
- ▶ Use a variety of sourcing channels, including job boards and career sites, social media, professional networks, and recruitment agencies to reach a broader talent pool.
- ▶ With employee referral programs cited as one of the top 3 successful recruitment strategies for finding qualified candidates, companies are encouraged to include this tool in their recruitment strategy.
- ▶ Establishing relationships with post secondary institutions can increase a company's profile and connect a company to a desired talent pool.

- ▶ Employers can provide and focus on non-monetary benefits to employment where it is difficult to offer competitive compensation and benefits. This can include providing flexible work arrangements.
- ▶ Employers can create a long term recruitment plan to develop candidates in anticipation of workforce shortages.
- ▶ Employers can utilize workplace resources to access job candidates and provide training to candidates.
- ▶ Promotional materials could be created to demonstrate how short the commute time is from urban areas in the Edmonton Metropolitan region to the major employment sites in the Study Area.

RETENTION

Worker retention refers to the strategies and efforts an employer implements to keep current employees engaged, satisfied, and employed with the company for an extended period. The goal of worker retention is to minimize employee turnover. Effective retention strategies help reduce the costs associated with hiring and training new employees and contribute to maintaining organizational stability and productivity.

VOLUNTARY TURNOVER

Voluntary turnover refers to the situation when employees choose to leave an organization of their own accord, as opposed to being terminated or laid off by the employer. Voluntary turnover can be costly for organizations due to the expenses associated with recruiting, hiring, and training new employees, as well as the potential loss of institutional knowledge and productivity.

The overall Study Area region turnover rate reported by employers in the survey was 2.1%. The results by industry are as follows:

- ▶ Mining, quarrying, and oil and gas extraction employers reported the highest voluntary turnover rate at 6.4%,
- ▶ Manufacturing employers reported a rate of 2.9%, and
- ▶ Transportation and warehousing employers reported a rate of 1.8%.

A few employers noted that that workers left for personal reasons and better paying opportunities.

RETIREMENTS

Employers surveyed reported that they expect to lose approximately 5.5% of their operations workforce to retirement over the next 5 years. According to the 2021 Federal Census, the share of the population in the labour force in the Edmonton CMA that is ages 60-64 is 9.0%.

SUCCESSION PLANS

Succession planning is a strategic process where an organization identifies and develops internal personnel with the potential to fill key leadership and other critical roles within the company in the future. This process ensures that the organization is prepared for the departure of important employees, such as senior leaders and skilled workers, by having a pipeline of capable and trained individuals ready to step into these positions. Succession planning involves evaluating current staff, providing targeted development opportunities, and fostering knowledge transfer to maintain

continuity and stability within the organization. It is essential for sustaining long-term success, minimizing disruptions, and supporting growth and change.

Over three-quarters (79%) of employers surveyed said that their organization has developed a succession plan to address anticipated retirements. Succession plans were noted by some employers to be in place to fill higher level or senior job positions, while a few employers commented that succession plans were in place for all positions.

RETENTION STRATEGIES

Employers surveyed reported their most successful worker retention strategy over the last 12 months was Competitive salary (cited by 82% of employers who responded). Next cited top successful retention strategies include Competitive benefits package (79%) and Positive work environment (75%). Rounding out the top five responses is Learning / growth opportunities (57%) and Excellent management / supervision (54%).

Retention tools that were monetary in nature (actual compensation or in-kind) represented just under half (48%) of the total successful retention strategies reported by employers surveyed.

Non-monetary benefits as a retention tool is especially important for employers who have difficulty competing with the wages and salaries other organizations are paying in the Study Area.

Other retention methods could include:

- ▶ Interesting/challenging work.
- ▶ Mental health / wellness supports and policies
- ▶ Reward and recognition programs
- ▶ Work / life balance
- ▶ Diversity and inclusion strategies and
- ▶ Perks.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Focusing on effective retention strategies can help employers reduce voluntary turnover and its associated costs.
- ▶ Companies will have increased success in worker retention by utilizing a variety of retention strategies.
- ▶ To encourage mature workers approaching retirement to stay longer, employers might offer incentives such as part-time hours, casual employment, or flexible work arrangements.
- ▶ Employers can create an organizational succession plan to develop candidates in anticipation of future workforce retirements.
- ▶ While offering competitive financial compensation is a crucial element to retention, a company's values, culture and work environment play a significant role in retaining employees.

TECHNOLOGICAL CHANGE

In the context of the workforce, technological change refers to the introduction and adoption of new technologies, tools, and systems that impact how work is performed, managed, and organized. This can include advancements in software, hardware, automation, digital communication, and data analytics.

Technological change often leads to shifts in number of jobs, job roles, processes, and skills required in the workforce.

IMPLEMENTING OR ADOPTING TECHNOLOGICAL CHANGE

Overall, 21% of employers surveyed reported their company is planning on implementing or adopting a technological change in the next 2 years that will affect their operations workforce in the Study Area. Just over one-third (38%) of employers reported they were unsure of their plans to adopt technological changes that would affect their workforce.

As technological advances are ever growing and changing at a fast pace, the impacts of any technological changes on a company's operations workforce can be difficult to determine. Technological changes in the workforce can impact the number of workers required, change the worker skill sets required, and / or change the job duties. A job lost to technological change could be offset by a new job created in response to the technological change.

The integration of AI into operations can significantly alter the nature of work across various dimensions:

- ▶ Task automation
- ▶ Enhanced decision-making
- ▶ Shifts in job roles
- ▶ Increased collaboration
- ▶ Upskilling and reskilling
- ▶ Workplace dynamics
- ▶ Innovation and creativity
- ▶ Operational flexibility
- ▶ Ethical and social considerations

It is important to note that implementing or adopting technological change has the potential to generate environmental benefits as well. Typically, the newest forms of production-related technology are also the cleanest in terms of environmental impact. Technologies can also optimize energy consumptions and waste management.

OPERATIONS WORKFORCE EMPLOYMENT CHANGES

The majority of employers (55%) reported that implementing or adopting technological changes will have no impact on the size of their operations workforce. Less than 10% of employers indicated that their operations workforce would either increase or decrease.

OPERATIONS SKILL UPGRADING

AI integration into operations transforms the nature of work by automating routine tasks, enhancing decision-making, shifting job roles, increasing collaboration, and necessitating the learning of new skills to adapt to new technologies and job requirements.

According to the employers surveyed, advances in technology are more likely to result in evolving workplace skill demands and requirements than in employment changes. Twenty-one percent of employers said their organization is planning on implementing or adopting technology that will change the nature of work so as to require skill upgrading. Just under half (45%) of employers were unsure.

The higher likelihood that skill upgrading will be required suggests that employers in the Study Area are currently planning on implementing or adopting more incremental technological changes, rather

than large-scale technological changes that would cause significant disruptions to the the company's workforce and its workloads and job roles.

OPERATIONS JOB DESCRIPTION CHANGES

Technological changes impact job descriptions by introducing new responsibilities, altering skill requirements, and shifting focus towards value-added activities. They lead to the automation of routine tasks, creation of new roles, and evolution of existing ones. Job descriptions increasingly reflect the integration of technology, interdisciplinary collaboration, and the need for continuous learning and adaptability. As technology continues to advance, job roles will likely continue to evolve, requiring employees to stay informed and agile.

Only 3% of employers surveyed reported their organization is planning on implementing or adopting technological changes in the next two years that will change the nature of work so as to completely change the job description. Close to one-quarter (24%) of employers were unsure.

The low reported rate for changes in job description could be related to existing technologies in place that have already had an impact on job descriptions for historical jobs. In the future, traditional job descriptions may be redefined to incorporate the use of new tools or systems. Employees might need to adapt to new methodologies and workflows.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Encouraging employers to implement or adopt technological changes and fostering networking among regional stakeholders can help the Study Area stay competitive in global markets.
- ▶ Supporting employers in finding a skilled workforce for these technological advancements is crucial. Utilizing workplace resources to recruit new talent or train existing employees can be beneficial. For skill development, the Canada-Alberta Job Grant can fund technical and specialized training to meet new demands.
- ▶ Increasing employer awareness of opportunities for upskilling and reskilling workers to adapt to new technologies can further boost productivity.

WORK ARRANGEMENTS

A variety of work arrangements exist to offer flexibility to traditional employment settings.

- ▶ Shift Work: For roles that require 24/7 coverage, such as in healthcare or manufacturing, shift work allows for work outside the traditional 9-to-5 hours.
- ▶ Leave Policies: Enhanced leave policies for circumstances like maternity/paternity leave, sabbaticals, or extended unpaid leave for personal reasons.
- ▶ Remote Work / Telecommuting: Employees work from a location outside the traditional office, often from home. This arrangement can be full-time, part-time, or as needed.
- ▶ Flexible Scheduling: This includes a variety of options. (1) Flextime - Employees have the freedom to choose their start and end times while working the required number of hours. (2) Compressed workweek - Working longer hours on some days and fewer on others, often resulting in an extra day off per week. (3) Staggered hours - Different start and end times for employees to reduce crowding or support work-life balance.
- ▶ Part-Time Work: Working fewer hours than the standard full-time schedule, often with proportional salary and benefits.

- ▶ Job Sharing: Two or more employees share the responsibilities of one full-time position, often splitting the hours and pay.
- ▶ Results-Only Work Environment (ROWE): Employees are evaluated based on their output and results rather than the number of hours worked. This approach offers high flexibility in terms of when and where work is completed.
- ▶ Annualized Hours: The total number of work hours for the year is agreed upon, but there is flexibility in how those hours are distributed across the year.
- ▶ Unlimited Paid Time Off (PTO): Some companies offer unlimited PTO, allowing employees to take time off at their discretion, as long as their work is completed.

The top 5 most cited work arrangements as reported by employer survey are Shift Work (69% of employers who responded), Leave Policies (50%), Remote Work / Telecommuting (42%) Flexible Scheduling (38%), and Part-Time Work (15%).

Flexible work arrangements offer substantial benefits, including improved work-life balance, increased job satisfaction, and enhanced productivity for employees. For employers, these arrangements can lead to higher employee retention, cost savings, and increased engagement. Overall, flexibility contributes to a more adaptable and resilient workforce, benefiting both individuals and organizations.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Given the nature of operations of the 4 industry groups included in the employer survey, shift work is a common work setting for the northeast Edmonton region, especially for the plants.
- ▶ Flexible work arrangements offer benefits to both employers and employees.
- ▶ Flexible work arrangements are a useful tool in a company's retention strategy. The offering of flexible work arrangements can be particularly beneficial when a company is unable to provide a competitive compensation package.
- ▶ Flexible work arrangements provide employers increased access to a broader talent pool, including qualified workers located outside the local area and to demographic groups that require flexibility in their work structure.

REMOTE WORK

Remote work offers numerous benefits, including increased flexibility, improved work-life balance, and cost savings for employees. For employers, remote work can lead to higher employee retention, access to a broader talent pool, and cost savings. Enhanced productivity and business continuity are also significant advantages. By leveraging remote work, both employees and employers can enjoy a range of benefits that contribute to a more effective and satisfying work experience.

Based on the employer survey, approximately 7.5% of workers are currently working remotely. This compares to approximately 3.6% of workers reported to have worked remotely before the COVID pandemic. While the COVID pandemic necessitated a shift to remote work arrangements to navigate isolation and safety protocols, many remote work options continue to exist post pandemic.

With respect to worker productivity, close to one-third (31%) of employers surveyed indicated that productivity was about the same with remote work, followed by 24% indicating remote work resulted in a decrease in productivity and 7% indicated remote work resulted in an increase in productivity. Thirty-eight percent were unsure of the impact of remote work on productivity.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ The COVID pandemic had a significant impact on traditional work settings, requiring employers to adopt alternate work arrangements that would adhere to health and distancing protocols. Following the pandemic, employees have continued to embrace remote work options.
- ▶ Employers are adapting to increased offerings of remote work, recognizing the access to a wider talent pool of potential workers and that remote work is a tool for worker retention strategies.
- ▶ While remote work can lead to increased productivity as workers can experience fewer workplace distractions and can focus on outcomes rather than hours spent at work, there is some concern that worker productivity actually decreases with remote work. Employers need to have clear expectations and deliverables in place to monitor and track employee performance in remote work arrangements.

DIVERSITY RECRUITMENT

Diversity recruitment refers to the strategies and practices organizations use to attract, hire, and retain a diverse workforce. The goal is to build a team that reflects a variety of backgrounds, experiences, and perspectives, enhancing innovation, creativity, and performance.

Diversity recruitment in the context of the employer survey included organizational plans, formal or informal, to recruit workers from underrepresented groups, including Indigenous Peoples, Mature workers (ages 55+), New immigrants, Persons with disabilities, Women, Youth (ages 15-24), and Other groups.

UNDERREPRESENTED AND UNDEREMPLOYED WORKFORCE GROUPS

The employers surveyed reported the following proportion of their operations workforce falls into the following underrepresented and underemployed groups:

- ▶ Aboriginal Identity: First Nations workers comprised 3.6% of the operations workforce and Métis workers comprised 1.0%. Less than 0.5% reported employing Inuit workers. Overall, Indigenous Peoples comprised 4.6% of the operations workforce.
- ▶ Mature: Mature workers age 55-64 comprised 11.3% of the operations workforce. Seniors ages 65 and over comprised 1.6%.
- ▶ New Immigrants: New immigrants who immigrated to Canada in the last five years comprised 9.0% of the operations workforce.
- ▶ Women: Women comprised 20.8% of the operations workforce.
- ▶ Youth: Young adults ages 15-24 comprised 7.8% of the operations workforce.

An evaluation of the underrepresented and underemployed segments of the labour force reveals there is higher unemployment rates for certain groups. The following unemployment rates are based on data published by Statistics Canada:

- ▶ Aboriginal Identity: Indigenous Peoples living off-reserve have significantly higher rates of unemployment than the general labour force. In 2023 for Western Provinces within Canada, the unemployment rate is 9.1% for Indigenous Peoples, in comparison to the overall population unemployment rate of 5.5%.²⁸

²⁸ Statistics Canada, Table: 14-10-0365-01.

- ▶ **Mature:** The unemployment rate was 4.9% for Mature workers ages 55-64 in Alberta in 2023, lower than the overall unemployment rate of 5.9%. Mature workers are an age cohort of interest because they often bring valuable experience and expertise to the workforce.²⁹
- ▶ **New Immigrants:** The unemployment rate for immigrants landed in Canada 5 years or less was significantly higher than the average for the general workforce. New immigrants ages 15 years and over had an unemployment rate of 8.8% in 2023, compared to an unemployment rate of 5.1% for individuals born in Canada.³⁰
- ▶ **Persons With Disabilities:** Persons with disabilities have significantly higher rates of unemployment. The unemployment rate for persons with disabilities ages 25-64 in Alberta is 10.2% in 2017, compared to 6.3% for persons without disabilities.³¹
- ▶ **Women:** The unemployment rate for women ages 15-64 in Alberta was 5.8% in 2023, compared to 6.0% for men and 5.9% overall. While women have a lower unemployment rate overall, they are underrepresented in the workforce in traditionally male-dominated trades and industry occupations.³²
- ▶ **Youth:** Young adults ages 15-24 in the Study Area also have higher unemployment rates than the average for Alberta, 14.2% compared to 7.1% overall.³³

These underemployed groups represent valuable labor pools for employers, provided that their skills align with available positions. However, individuals in these groups might need additional education and training to effectively participate in the Study Area's job market.

To facilitate their successful entry into the workforce, these individuals may require extra support. For instance, Women Building Futures (WBF) is an organization dedicated to preparing women for careers in industries where they have historically been underrepresented. WBF aims to boost the participation of Indigenous women and all women in the workforce through comprehensive services including assessment, training, job placement, and retention support. By collaborating with employers, WBF ensures that candidates are well-prepared and equipped to meet industry demands.

DIVERSITY RECRUITMENT PLANS

Underemployed groups provide an under-utilized labour pool for employers to access. Recruiting people within these underrepresented groups who care already living within or in close proximity to the Study Area may be easier for employers than finding workers willing to relocate. While labour mobility provides employers with a larger pool of qualified candidates, hiring from a more local workforce with the necessary skills can be more cost effective.

More than three-quarters (78%) of the employers surveyed had plans to recruit workers from at least one of the identified groups, while 18% has no diversity recruitment plans and another 18% are not hiring in the next 12 months.

Just under half (46%) of employers have plans to recruit Women, 43% have plans to recruit Indigenous Peoples, 39% each have plans to recruit Youth and New Immigrants, and 18% have plans to recruit Mature workers. Other groups employers identified recruiting included Temporary Foreign Workers (14%), Non-Binary (11%), and Persons with disabilities (7%).

²⁹ Statistics Canada, Table 14-10-0020-01.

³⁰ Statistics Canada, Table 14-10-0087-01.

³¹ Statistics Canada, Canadian Survey on Disability 2017, Table 13-10-0377-01.

³² Statistics Canada, Table 14-10-0020-01.

³³ Statistics Canada, Table 14-10-0287-02.

Employers surveyed reported that diversity recruitment has tangible benefits in the Study Area. One employer commented that different ideas and a diversity of perspectives and experiences that are heterogeneous, may serve to broaden their views and specifically consider challenges/solutions from that perspective. Another employer cited a new business analyst program where university graduates are given a 2 year 4 department rotation role. These graduates have come up with good ideas to improve processes and find efficiencies in company operations.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Increasing awareness of current resources and supports to recruit underemployed groups. For example:
 - ▶ Disability Related Employment Supports (DRES) funding is available to assist Albertans with disabilities to gain employment and enable their full participation in the workforce. Supports can include a job coach, worksite modification or assistive technology.³⁴
 - ▶ The Government of Alberta lists locally available training and employment programs and services to help unemployed and underemployed individuals gain the skills and knowledge to gain employment.³⁵ Examples include: Integrated training to support connection between training and application of new skills in the workforce, workplace training, and immigrant bridging.³⁶
- ▶ Expanding recruitment efforts to include underrepresented and underemployed groups could tap into valuable, underutilized labor pools, leading to greater success.
- ▶ Highlighting regional success stories of employers who have effectively hired underrepresented and underemployed individuals could enhance diversity recruitment efforts.
- ▶ Strengthening partnerships between employers and post-secondary institutions can help attract underrepresented and underemployed individuals into relevant education and training programs, benefiting both employers and workers.
- ▶ Fostering connections among regional stakeholders—such as employers, post-secondary institutions, training providers, and organizations serving underrepresented and underemployed groups—can create mutual benefits for both employers and workers.

WORKPLACE RESOURCES

Workplace resources in the context of the survey included the following programs:

- ▶ Canada-Alberta Job Grant³⁷: The employer applies on behalf of its current or future employees to receive funding for eligible training costs. Employers decide what type of training may be needed for their employees and which employees get training.

³⁴ <https://www.alberta.ca/disability-related-employment-supports>

³⁵ <https://www.alberta.ca/training-and-employment-services>

³⁶ <https://www.alberta.ca/training-and-employment-services-directory>

³⁷ <https://www.alberta.ca/canada-alberta-job-grant>. Funding is provided through the Government of Canada through the Workforce Development Agreement.

- ▶ Note: Since the time of the survey, the Government of Alberta announced that the Canada-Alberta Job Grant has been closed for applications until March 31, 2025.³⁸
- ▶ Indigenous Employment Training Partnerships:³⁹ This program provides grant funding to “Indigenous communities and organizations to deliver group-training projects designed in partnership with employers and other partners. These partnerships will assist unemployed or under-employed Indigenous individuals to gain the necessary skills training and work experience to obtain and maintain long-term employment.”
- ▶ Labour Market Partnerships (LMP):⁴⁰ Under the umbrella of Workforce Partnerships grants, funding for LMP projects is available to organizations (public and private) that come together in a partnership with the Government of Alberta to develop information and best practices to support local labour market strategies. This can include:
 - ▶ Researching labour market trends
 - ▶ Developing strategic plans to prepare for future skills requirements
 - ▶ Promoting current labour market needs and shortages
 - ▶ Sharing best practices in employment development and training
- ▶ Workforce Attraction and Retention Partnerships (ARP):⁴¹ Under the umbrella of Workforce Partnerships grants, funding for ARP projects is available to organizations (public and private) that come together in a partnership with the Government of Alberta to pilot and test difference workforce development strategies and initiatives to attract and retain workers. This can include:
 - ▶ Connecting stakeholders to knowledge and resources that will support their attraction and retention efforts
 - ▶ Piloting, testing or applying tools, techniques and processes that assist in the attraction and retention of workers
- ▶ Workforce Strategies Grants:⁴² This grant supports organizations with innovative solutions that will help Albertans develop new skills and assist employers and industry to grow their workforce. Eligible applicants can apply to one of three streams of funding:
 - ▶ Skills Development Stream: supports the re-skilling of unemployed Albertans
 - ▶ Regional and Employer-Focused Stream: supports region or employer-led projects that address regional workforce challenges
 - ▶ Industry-Focused Stream: supports industry-led projects that address provincial workforce needs
- ▶ Aviation Skill Grant:⁴³ This grant program focuses on the province’s aviation and aerospace industry. The program supports training and re-skilling to help employers in this industry gain the skills and talent to grow their businesses and Alberta’s economy.

³⁸ <https://www.alberta.ca/canada-alberta-job-grant>. “The Canada-Alberta Job Grant is closed for applications until March 31, 2025. This closure is due to the federal government’s decision to cut funding delivered under the Canada-Alberta Labour Market Transfer Agreement. Applications submitted prior to the closure will continue to be processed.”

³⁹ <https://www.alberta.ca/indigenous-employment-training-partnerships-program>. This program is based on a partnership between Government of Alberta and Government of Canada.

⁴⁰ <https://www.alberta.ca/workforce-partnerships-grants>. LMP and ARP are workforce partnership grants based on a partnership between Government of Alberta and Government of Canada.

⁴¹ Ibid.

⁴² <https://www.alberta.ca/workforce-strategies-grants>.

⁴³ <https://www.alberta.ca/aviation-skills-grant>. Note: At the time of this report, the Aviation Skills Grant was closed and no longer accepting applications.

APPLYING FOR WORKPLACE RESOURCES

Workplace resources are government funding programs that employers can access or apply for. One-third (33%) of employers surveyed said their organization has applied for or has plans to apply for workplace resources.

Uptake on some workplace resources is higher than for others.

- ▶ Thirty-one percent of employers identified applying for or having plans to apply for the Canada-Alberta Job Grant,
- ▶ Ten percent for Indigenous Employment Training Partnerships,
- ▶ Seven percent for the Labour Market Partnerships (LMP),
- ▶ Seven percent for the Attraction and Retention Partnerships (ARP), and
- ▶ No employers reported accessing the Workforce Strategies Grants or Aviation Skill Grant. Given the Study Area primarily includes the petrochemical industry, it is reasonable to see no uptake for the Aviation Skill Grant.

Approximately one-third (34%) of the employers surveyed said their organization has never applied for and does not have any plans to apply for any workplace resources. Another 28% were unsure.

The reasons employers reported in the survey for not applying for workplace resources included:

- ▶ Don't know enough about them
- ▶ Don't think we qualify for them,
- ▶ Administrative burden,
- ▶ Never heard of them,
- ▶ Don't have the budget to apply/too costly, and
- ▶ Not required.

This demonstrates that employer awareness and uptake for workplace resources could be improved in the Study Area.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Increasing awareness to employers in the Study Area about available workplace resources that could help tackle employment challenges
 - ▶ The Government of Alberta lists workforce contacts and employer resources to assist employers with recruiting, retaining and strengthening their workforce.⁴⁴ The current listing includes: industry workforce partnership specialists; regional workforce consultants; and links to laws, regulations and codes.
 - ▶ Employers can also contact the Alberta Government (abworkforce@gov.ab.ca) for information on current employer grants and programs available to them.
- ▶ Creating brief informational materials for employers on the availability of workplace resources and how specific workplace resources can benefit their organizations Education / Skill Development

⁴⁴ <https://www.alberta.ca/workforce-contacts-employer-resources>

Based on the largest employed occupation groups in the study area, 20 top occupations have been reviewed for their education and skill requirements and the availability of education and training programs in the Edmonton Region.

These occupations include:

- ▶ Transport truck and transit drivers (NOC 7330)
- ▶ Machining, metal forming, shaping and erecting trades (NOC 7210)
- ▶ Trades helpers and labourers (NOC 7511)
- ▶ Managers in construction and facility operation and maintenance (NOC 7001)
- ▶ Technical electrical trades and electrical power line and telecommunication workers (NOC 7220)
- ▶ Labourers in processing, manufacturing and utilities (NOC 9510)
- ▶ Plumbers, pipefitters and gas fitters (NOC 7230)
- ▶ Machinery and transportation equipment mechanics (except motor vehicles) (NOC 7240)
- ▶ Carpenters and cabinet makers (NOC 7231)
- ▶ Contracts and supervisors, technical industrial, electrical and construction trades and related workers (NOC 7201)
- ▶ Longshore workers and material handlers (NOC 7510)
- ▶ Operators, drillers and blasters (NOC 7340)
- ▶ Managers in manufacturing and utilities (NOC 9001)
- ▶ Supply chain logistics, tracking and scheduling coordination occupations (NOC 1440)
- ▶ Taxi, personal service and delivery service drivers (NOC 7520)
- ▶ Administrative, property and payroll officers (NOC 1310)
- ▶ Technical occupations in civil, mechanical and industrial engineering (NOC 2230)
- ▶ Building maintenance installers services and repairers (NOC 7320)
- ▶ Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators (NOC 7202)
- ▶ Central control and process operators in processing and manufacturing (NOC 9310)

Of these occupations, 13 require a post-secondary certificate or degree. All have available programs in the Edmonton Region, many at multiple institutions. Seven of the top occupations do not require a post-secondary certificate or degree.

The detailed results by occupation are provided in Appendix C.

KEY FINDINGS

The results of the Study Area employer survey suggest the following key findings:

- ▶ Industry-Academic Collaborations: Encourage partnerships between educational institutions and industry to ensure curricula are aligned with current job market demands. This can include advisory boards, joint research projects, and curriculum development initiatives.
- ▶ Public-Private Partnerships: Create partnerships between government agencies, educational institutions, and private companies to address skill gaps and develop training programs tailored to industry needs.
- ▶ Industry-Specific Career Counselling: Provide career counselling that is tailored to specific industries or job roles, helping job seekers understand the qualifications and skills needed for various fields.

- ▶ Skill Mapping: Conduct skill mapping exercises to identify the skills in demand by employers and align training programs accordingly.
- ▶ Targeted Programs: Develop programs and initiatives aimed at supporting diverse and underrepresented groups, including minorities, and individuals with disabilities, to ensure they have access to employment opportunities.

Appendix A: Employer Survey Results

Applications Management Consulting Ltd. conducted an employer survey on behalf of the City of Fort Saskatchewan, Lamont County, Strathcona County, Sturgeon County, and the Ministry of Jobs, Economy and Trade. This survey gathered relevant, timely, and accurate labour market information from various organizations in the study area regarding their employment practices.

In this survey, employers were initially asked for general information about their organization's activities within the Study Area. To qualify for participation, employers confirmed their industry, municipalities, and locations within the Study Area. The survey covered various aspects of their operations, including the total number of operations workers, the operations workforce profile by demographic categories, top operations occupations and their wage rates, operations overtime hours, and anticipated retirements. Employers also provided details about their turnaround activities, including schedules, turnaround workers, and top turnaround occupations. Additionally, they were asked about their future plans, including expansion schedules, future construction and operations workforce requirements, and top future occupations. Information was also collected on vacant positions, recruitment strategies, voluntary turnover, retirements, and retention strategies. Lastly, employers shared details about their use of workplace resources, technological changes, and diversity recruitment plans.

This section provides an overview of selected findings from the survey of employers in the Study Area. The results presented below are based on the survey responses and have been scaled to reflect the total for the industry groups in the study area that were represented in the survey.

SURVEY METHODOLOGY

The survey was designed to provide a more in depth picture of the major employers and their workforce in the Study Area. The Project Committee worked collaboratively with Applications Management Consulting Ltd. to develop, review and refine the survey questionnaire to ensure the questions aligned with the overall project purpose and collected information related to limitations in the availability of regional data and information. A similar employment survey was conducted in 2019 with employers throughout this region.

Employers were selected to participate in the survey in consultation with the Project Committee. Consideration was given to the location and industry of the employers, to ensure relevant organizations in the Study Area were contacted. The survey focused on employers who are primarily involved in industrial activities within the Study Area. This contact list was primarily comprised of various contact lists obtained from the Project Committee.

The employer survey was conducted in March to May of 2024 to collect information from major employers in the Study Area. All employers were contacted by a combination of telephone and email to solicit their participation. The survey questionnaire was developed using an on-line platform, and all participating employers completed the survey electronically.

SURVEY SCALING

Employer survey data was scaled to match the total regional industry data by strata. For example, if 3 surveys were completed in a strata and 6 firms are known to be in the strata, the scaling factor is 2 ($6/3=2$). Some adjustments were made to the scaling factors. For example, in some instances surveys were not completed by major employers, in which case some of the data was constructed from publicly available information.

All survey data reported reflects scaled totals that are intended to be representative of the total number of employers in the industry groups represented in the survey.

The survey captured data for the following industries, which represents 25,544 jobs within the Study Area.

- ▶ Mining, quarrying and oil and gas extraction
- ▶ Construction
- ▶ Manufacturing
- ▶ Transportation and warehousing

Scaled Employment By Industry (2 Digit NAICS)⁴⁵

Industry (NAICS)	# of jobs	% of jobs
21 Mining, quarrying, and oil and gas extraction	3,399	13.3%
23 Construction	9,302	36.4%
31-33 Manufacturing	8,621	33.8%
48-49 Transportation and warehousing	4,222	16.5%
Total	25,544	100%

Note: Data is based on scaled survey results. Some job totals are rounded.

SURVEY RESPONSE RATE

When contacting employers in the Study Area, surveyors found that for the most part respondents were interested in participating. Overall, the response rate for completed surveys was 58%. Of the 62 organizations formally contacted by Applications Management Consulting Ltd., 36 respondents completed the survey.^{46,47}

LIMITATIONS OF THE SURVEY

When reviewing the survey results, there are some limitations that should be considered. The survey represents the views of employers in the Study Area. No attempt was made to contact workers and as a result their perspectives are not captured by the survey. The survey results are based on a

⁴⁵ North America Industrial Classification System (NAICS) is a standardized way of classifying employment establishments for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force. <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1369825>

⁴⁶ The initial survey contact list comprised of over 90 employers. During the course of the process to contact employers, it was determined that some of the organizations were either no longer in operation, had changed ownership/amalgamated, were outside of the Study Area, or the nature of the operations was outside the focus of this work.

⁴⁷ To increase the survey participation rate, the initial survey contact list was expanded to include employers located within the Fort Saskatchewan Industrial Area due to its location within the Study Area. This expanded the contact list by 50 employers located in the Eastgate Business Park in Fort Saskatchewan.

selected sample of major employers in key industry groups, therefore the results do not reflect all employers or all industries in the Study Area.

PROFILE OF SURVEY RESPONDENTS

During the employer survey process, a total of 36 employers completed the survey, representing 60 locations throughout the Study Area.

EMPLOYERS BY INDUSTRY

More employer surveys were completed in the Manufacturing industry than any other, with 16 (44%) of the 36 total surveys. The Manufacturing industry in Study Area includes Chemical manufacturing (325), Petroleum and coal products manufacturing (324), Primary metal manufacturing (331), Plastics and rubber products manufacturing (326), and Non-metallic mineral product manufacturing (327).

Construction made up 8 (22%) of the survey responses, following by both Mining, quarrying, and oil and gas extraction and Transportation and warehousing with 5 (14%) survey responses each.

There was one company each representing Wholesale Trade and Retail Trade. For the purposes of this report and survey findings, these companies were not included in any scaled results due to the insufficient representation of these industries in the survey.

What industry best describes your organization?

Industry (NAICS)	# of employers	% of employers	# of workers	% of workers
Manufacturing (31-33)	16	44.4%	2,645	54.3%
Construction (23)	8	22.2%	345	7.1%
Mining, quarrying, and oil and gas extraction (21)	5	13.9%	1,646	33.8%
Transportation and warehousing (48-49)	5	13.9%	226	4.6%
Wholesale Trade (41)	1	2.8%	10	0.2%
Retail Trade (44-45)	1	2.8%	1	0.0%
Total	36	100%	4,873	100%

Note: 36 employers provided a response for this question.

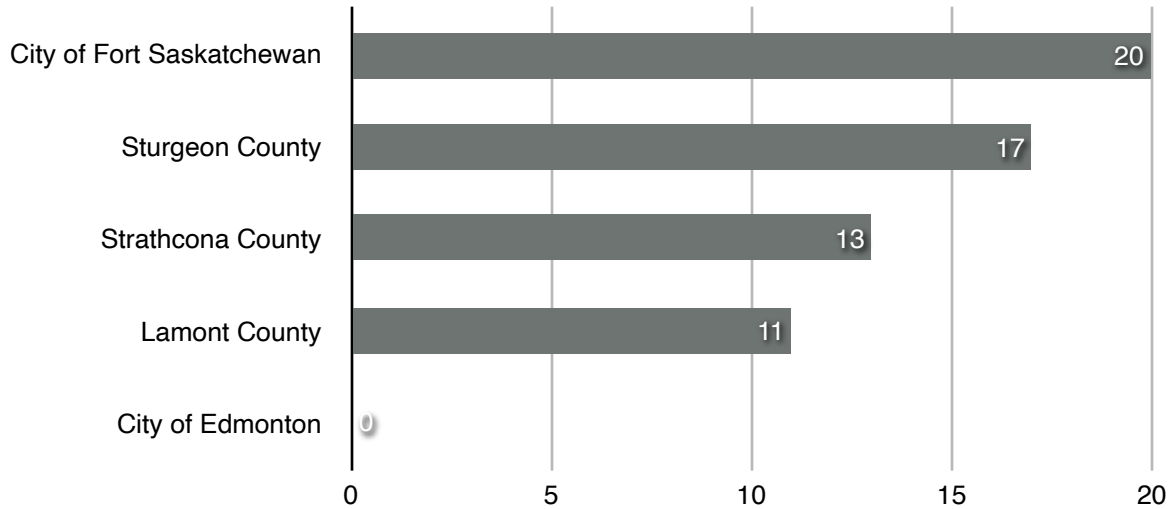
EMPLOYERS BY MUNICIPALITY

The 36 businesses that completed the survey reported they operate in or provide services to over 60 locations within the Study Area. Two-thirds (67%) of the survey respondents (24 businesses) indicated they operate in one municipality only in the Study Area. Four businesses operate in two municipalities, three businesses operate in three municipalities, and five businesses reported operating

in four municipalities in the Study Area. No survey respondents identified having operations in the City of Edmonton.

The City of Fort Saskatchewan was the most cited municipal location with 20 companies having operations or services in the City (33% of total locations), followed by Sturgeon County cited by 17 companies (28%), Strathcona County cited by 13 companies (21%), and Lamont County cited by 11 companies (18%).

Which location(s) does your organization have operations or services in the Study Area? (Check all that apply)



Note: 36 employers provided a response for this question.

OPERATIONS

Employers were asked various questions about their operations workforce. Operations refers to the work activities required for the day-to-day operation and maintenance of an industrial facility. This includes various types of workers, including but not limited to engineers, technologists, tradespeople, plant operations and maintenance workers, as well as management, business and administration staff.

OPERATIONS WORKFORCE BY WORKER CATEGORY

Based on the 36 employers included in the survey, the four industries represented in the survey employ a total of approximately 25,544 operations workers in the Study Area.⁴⁸

Of this total, 20,139 (78.8%) are Full time workers and 3,189 (12.5%) are Contract workers.

The remainder of the operations workforce includes 1,520 (6.0%) Seasonal workers, 487 (1.9%) Temporary Foreign workers, 136 (0.5%) Part time workers, and 73 (0.3%) Casual workers.

⁴⁸ Operations workforce does not include those workers involved in turnaround maintenance or new construction projects.

How many operations workers are currently employed?

Worker Category	# of operations workers	% of operations workers
Full time	20,139	78.8%
Part time	136	0.5%
Contract	3,189	12.5%
Seasonal	1,520	6.0%
Temporary Foreign Worker	487	1.9%
Casual	73	0.3%
Total	25,544	100%

Note: 34 employers provided a response for this question.

TOP OPERATIONS OCCUPATIONS

Employers were asked in what occupations they currently employ the most workers. Occupations with 500 or more workers are shown below.

According to the employers who participated in the survey, the top three operations occupations in the Study Area are Trades helpers and labourers (NOC 7511), Transport truck and transit drivers (NOC 7330), and Central control and process operators in processing and manufacturing (NOC 9310).⁴⁹

In what occupations do you currently employ the most workers?⁵⁰

NOC Code	Occupation Title	# of operations workers
7511	Trades helpers and labourers	2,400
7330	Transport truck and transit drivers	1,768
9310	Central control and process operators in processing and manufacturing	1,605
9210	Utilities equipment operators and controllers	1,193
2231	Technical occupations in electronics and electrical engineering	1,150
7420	Transport equipment operators, utility maintenance and related maintenance workers	1,068

⁴⁹ Two employers did not specify which occupations they currently employ the most workers.

⁵⁰ As defined by Statistics Canada, "The National Occupational Classification (NOC) Canada is a classification of occupations designed primarily for use in statistical programs. It is also used for employment-related program administration and to compile, analyze and communicate information about occupations, such as labour market information." <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=132254>

NOC Code	Occupation Title	# of operations workers
2211	Technical occupations in life sciences	809
2223	Technical inspectors and regulatory officers	808
2132	Manufacturing and processing engineers	805
7001	Managers in construction and facility operation and maintenance	718
7001	Managers in construction and facility operation and maintenance	718
7220	Technical electrical trades and electrical power line and telecommunications workers	647
7230	Plumbers, pipefitters and gas fitters	620
7340	Operators, drillers and blasters	587
2132	Manufacturing and processing engineers	528

Note: 34 employers provided a response for this question.

OPERATIONS WORKFORCE BY AGE CATEGORY

Twenty-eight employers provided information about the ages of their operations workers, representing an estimated total of 19,724 workers. Approximately 10,931 (55.4%) are ages 25-44 years old, and 4,707 (23.9%) are ages 45-54 years old. Of mature workers ages 55 and over, 2,231 (11.3%) are ages 55-64 and 321 (1.6%) are over 65 years old. Only 1,534 (7.8%) are youth / young adults ages 15-24 years old.

What proportion of your operations workforce falls into the following age categories?

Worker Category	# of operations workers	% of operations workers
15-24 years	1,534	7.8%
25-44 years	10,931	55.4%
45-54 years	4,707	23.9%
55-64 years	2,231	11.3%
65+ years	321	1.6%
Total	19,724	100%

Note: 28 employers provided a response for this question.

OPERATIONS WORKFORCE BY GENDER CATEGORY

Twenty-eight employers provided information about the gender of their operations workers, representing an estimated total of 19,724 workers.

Approximately 15,509 (78.6%) operations workers are Male and 4,101 (20.8%) are Female.

What proportion of your operations workforce falls into the following gender categories?

Worker Category	# of operations workers	% of operations workers
Male	15,509	78.6%
Female	4,101	20.8%
Other	114	0.6%
Total	19,724	100%

Note: 28 employers provided a response for this question.

OPERATIONS WORKFORCE BY IMMIGRATION CATEGORY

Nineteen employers provided information about their operations workers who immigrated to Canada within the last five years, representing an estimated total of 13,143 workers.

Approximately 1,177 (9.0%) operations workers Immigrated to Canada in the last five years.

What proportion of your operations workforce falls into the following immigration categories?

Worker Category	# of operations workers	% of operations workers
Immigrated to Canada in the last five years	1,177	9.0%
Did not immigrate to Canada in the last five years	11,966	91.0%
Total	13,143	100%

Note: 19 employers provided a response for this question.

OPERATIONS WORKFORCE BY INDIGENOUS CATEGORY

Eleven employers provided information about their operations workers who are Indigenous, representing an estimated total of 7,227 workers.

Approximately 261 (3.6%) operations workers are First Nations, 71 (1.0%) are Métis, and 4 (0.1%) are Inuit.

Indigenous workers make up 4.7% of the operations workforce.

What proportion of your operations workforce falls into the following First Nations/Métis/Inuit categories?

Worker Category	# of operations workers	% of operations workers
First Nations	261	3.6%
Métis	71	1.0%
Inuit	4	0.1%
Non-Indigenous identity	6,891	95.4%
Total	7,227	100%

Note: 11 employers provided a response for this question.

OPERATIONS WORKFORCE BY COMMUNITY

Twenty-four employers provided information about where their operations workers live, representing an estimated total of 16,620 workers.

Approximately 73% of the operations workforce were identified to live in one of the listed locations in the survey.

The highest number of workers live in the City of Edmonton with a count of 5,326 (32%). This was followed by 3,002 workers (18.1%) living in the City of Fort Saskatchewan, 1,726 (10.4%) living in the Sturgeon Sub-Region, 976 (5.9%) in Strathcona County, 546 (3.3%) in the Lamont Sub-Region, 379 (2.3%) in the Parkland Sub-Region, and 138 (0.8%) in the Leduc Sub-Region.⁵¹

What proportion of your operations workers live in the following communities?

Worker Category	# of operations workers	% of operations workers
City of Edmonton	5,326	32.0%
City of Fort Saskatchewan	3,002	18.1%
Sturgeon Sub-Region	1,726	10.4%
Strathcona County	976	5.9%
Lamont Sub-Region	546	3.3%
Parkland Sub-Region	379	2.3%

⁵¹ Lamont Sub-Region: includes Lamont County (and hamlets), Towns (Bruderheim, Lamont, Mundare), Villages (Andrew, Chipman)
 Strathcona County: includes Sherwood Park and hamlets
 Sturgeon Sub-Region: includes Sturgeon County (and hamlets), Cities (St. Albert), Towns (Bon Accord, Gibbons, Legal, Morinville, Redwater)
 Leduc Sub-Region: includes Leduc County (and hamlets), Cities (Beaumont, Leduc), Towns (Calmar, Devon, Thorsby), Villages (Warburg)
 Parkland Sub-Region: includes Parkland County (and hamlets), Cities (Spruce Grove), Towns (Stony Plain), Villages (Spring Lake)

Worker Category	# of operations workers	% of operations workers
Leduc Sub-Region	138	0.8%
Other	1,309	7.9%
Unsure	3,218	19.4%
Total	16,620	100%

Note: 24 employers provided a response for this question.

OPERATIONS WORKFORCE BY MODE OF TRANSPORTATION

Twenty-six employers provided information regarding their employees' mode of transportation, representing an estimated total of 19,040 workers.

The majority of the operations workforce (16,015 or 84%) are reported to use a private vehicle as the primary mode of transportation. Approximately 10% workers were reported to use an other mode of transportation not identified in the survey, followed by 972 workers (5%) using employer provided transportation, and 71 (0.4%) walking. Employers did not identify public transit as a mode of transportation used by its employees.

What proportion of your operations workforce uses the following modes of transportation?

Worker Category	# of operations workers	% of operations workers
Vehicle	16,015	84.1%
Other	1,982	10.4%
Employer Provided	972	5.1%
Walk	71	0.4%
Public Transit	0	0.0%
Total	19,040	100%

Note: 26 employers provided a response for this question.

OPERATIONS OVERTIME

Employers were asked if their operations overtime hours changed over the last 12 months, by how much, and what occupations experienced the most change in overtime hours.

OPERATIONS OVERTIME HOURS

Twenty-eight employers provided information about the percentage of their operations workforce hours that is overtime.⁵²

According to the employers who participated in the survey, the average percentage of operations workforce hours that is overtime is 16.5%.

The share of operations workforce hours that is overtime was highest for Manufacturing employers at 21.1%, followed by Transportation and warehousing employers at 14.2%, Construction employers at 13.0%, and Mining, quarrying, and oil and gas extraction employers at 11.8%.

What percentage of your operations workforce hours is overtime?

Industry (NAICS)	Average % of operations workforce hours that is overtime
Manufacturing (31-33)	21.1%
Transportation and warehousing (48-49)	14.2%
Construction (23)	13.0%
Mining, quarrying, and oil and gas extraction (21)	11.8%
Total	16.5%

Note: 28 employers provided a response for this question.

OPERATIONS OVERTIME HOURS CHANGES

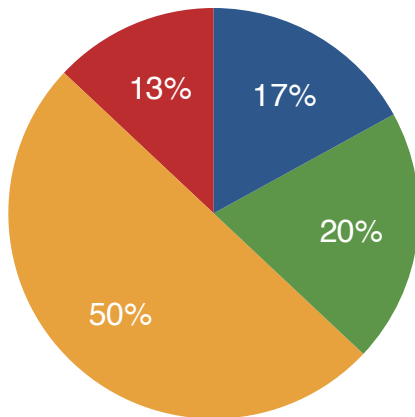
Thirty employers provided information about the change in share of overtime hours.

Five employers (17%) said their operations overtime hours Increased and 6 employers (20%) said their overtime hours Decreased.

Fifteen employers (50%) reported that the share of overtime hours for their operations workforce Stayed the same over the last 12 months and 4 (13%) were Unsure.

⁵² Operations workforce does not include those workers involved in turnaround maintenance or new construction projects.

Has the share of overtime hours for your operations workforce increased, decreased or stayed the same over the last 12 months?



● Increased ● Decreased ● Stayed the same ● Unsure

Note: 30 employers provided a response for this question.

OPERATIONS OVERTIME OCCUPATIONS AFFECTED

For the 5 employers who reported their operations overtime hours Increased, 4 employers provided the amount of increase, ranging from 5% to 10%.

Four employers identified the occupations experiencing the greatest increase in overtime hours. These occupations are summarized in the following table.

What occupations have experienced the greatest increase in overtime hours?

NOC Code	Occupation Title	# of employers
22312	Industrial instrument technicians and mechanics	1
72401	Heavy-duty equipment mechanics	1
93101	Central control and process operators, petroleum, gas and chemical processing	1
95100	Labourers in mineral and metal processing	3

Note: 4 employers provided a response for this question.

Six employers reported their overtime hours Decreased:

- ▶ Three employers reported a 3% decrease.
- ▶ Other single responses include: 10% decrease, over 50% decrease, and 100% decrease.

Five employers identified the occupations experiencing the greatest decrease in overtime hours. These occupations are summarized in the following table.

What occupations have experienced the greatest decrease in overtime hours?

NOC Code	Occupation Title	# of employers
22312	Industrial instrument technicians and mechanics	1
72106	Welders and related machine operators	1
72301	Steamfitters, pipefitters and sprinkler system installers	1
73300	Transport truck drivers	1
93101	Central control and process operators, petroleum, gas and chemical processing	1
94112	Rubber processing machine operators and related workers	1
94140	Process control and machine operators, food and beverage processing	1

Note: 5 employers provided a response for this question.

TURNAROUND

Employers were asked various questions about their turnaround. Turnaround is a scheduled event in which an entire process unit of an industrial facility is taken off-stream for an extended period for revamp or renewal.⁵³

TURNAROUND SCHEDULE

Employers were asked for the frequency and next scheduled event for their Type 1, 2 and 3 turnarounds.

Of the 20 scheduled turnarounds reported in the survey, 8 (40%) are occurring at a frequency of once per year or more.⁵⁴

⁵³ Turnaround does not include day-to-day maintenance activities or unscheduled maintenance events.

⁵⁴ Three employers reported more than one scheduled turnaround.

What is your Type 1, Type 2 and Type 3 turnaround schedule?

Frequency	# of turnarounds
Every 2 Months	1
Every Year	7
Every 2 Years	1
Every 3 Years	2
Every 4 Years	1
Every 5 Years	2
Every 8 Years	1
Every 10 Years	2
Not Identified	3
Total	20

Note: 16 employers provided a response for this question.

Selected comments about turnaround schedules are below:

- ▶ I am only aware of the one in 2025.
- ▶ We have at least one turnaround event per year. These are outages that last longer than 30 days. We also have outages that last up to 30 days.
- ▶ Our major turnaround is every 8 years. We have different units that have intermittent turnarounds and pit-stops.

Selected comments from employers without turnaround schedules are below:

- ▶ We provide services to the oil & gas industry who have turn around schedules - we don't have one at our location as we are not a plant.

Some employers reported that their turnarounds do not occur on a set schedule. In addition to employers who participated in the survey, there are other employers in the Study Area whose turnaround employment information is not captured.⁵⁵ It is expected that the demand for turnaround workers is more acute at certain times than what is shown in the chart below.

Employers reported the frequency and Quarter/Year for each of their scheduled turnarounds. Over a six year period between 2024-2029, a total of 48 turnaround events are anticipated, including:

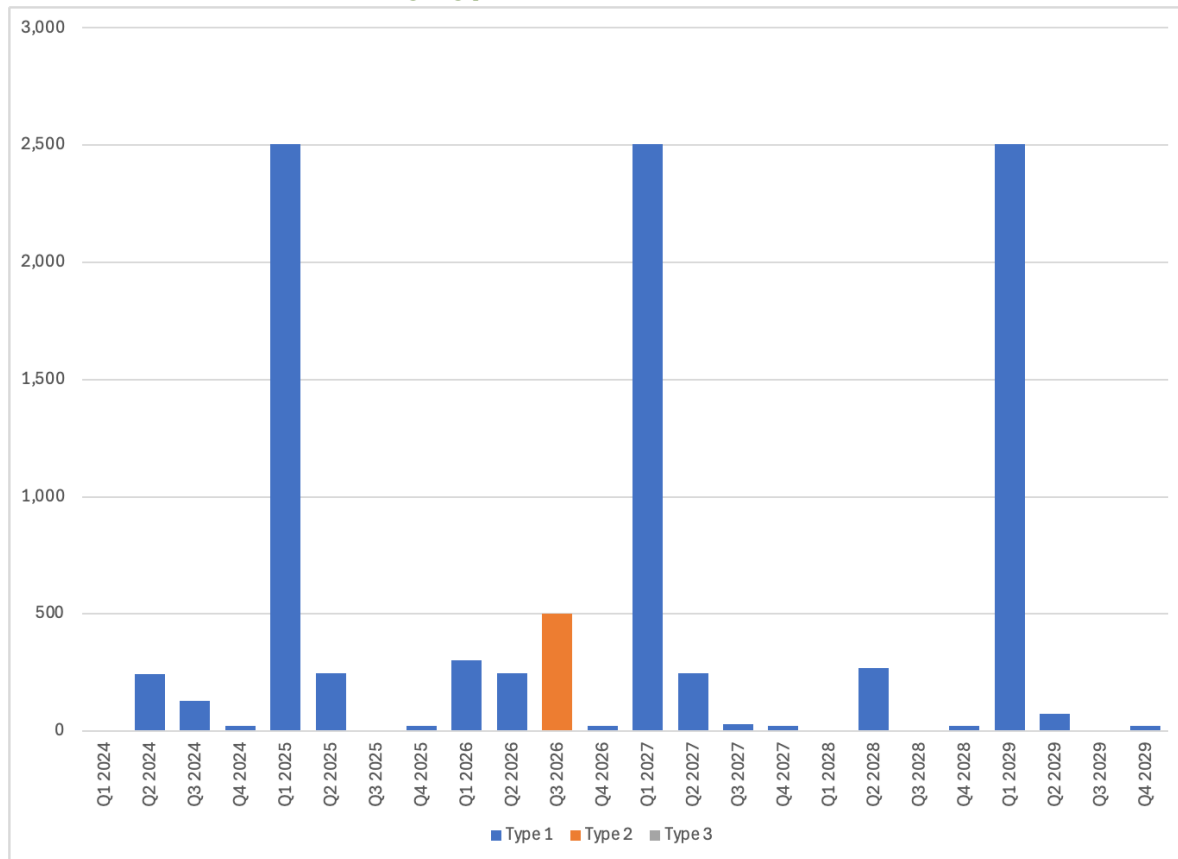
- ▶ Twelve (12) Type 1 turnarounds,
- ▶ Three (3) Type 2 turnarounds, and
- ▶ Two (2) Type 3 turnarounds.⁵⁶

⁵⁵ Turnaround employment was not scaled because it is difficult to project the experience of some Study Area employers to others, because they all have unique processes - scaling in this case would likely be too speculative.

⁵⁶ Turnaround types are not defined by employers in a standard way. Generally, for the purposes of the survey results, Type 1 is occurring most frequently and Type 3 least frequently.

The Type 1 turnaround event occurring every 2 years in Quarter 1 is undertaken by a single employer, requiring an estimated 2,500 turnaround workers. If other employers schedule their turnaround during this time period, there is a higher likelihood temporary worker shortages would occur.

Next Turnaround Jobs By Type



TURNAROUND WORKFORCE BY INDUSTRY

Based on the employer survey, Mining, quarrying, and oil and gas extraction employers are capturing 70% of the workers required for the reported turnaround types. This is followed by Manufacturing (26%) and Construction (4%). No Transportation and warehousing employers reported any turnaround scheduling.

Turnaround Workforce By Industry⁵⁷

Industry (NAICS)	# of turnaround types	# of turnaround type workers	% of turnaround workers
Mining, quarrying, and oil and gas extraction (21)	5	2,885	70.1%
Manufacturing (31-33)	6	1,073	26.1%
Construction (23)	4	155	3.8%
Transportation and warehousing (48-49)	0	0	0.0%
Total	15	4,113	100%

Note: 11 employers provided a response for this question. Worker counts are not scaled; they are based on the number of workers and noted industries as reported in the survey.

Selected comments about turnaround workers from employers are below:

- ▶ Majority of employees are: Lamont County, Fort Sask, Sherwood Park and Edmonton.
- ▶ This varies by turnaround event.

TOP TURNAROUND OCCUPATIONS

Employers with scheduled turnarounds were asked in what occupations they expect to employ the most workers to complete their scheduled turnarounds.

According to the employers who responded to these questions in the survey, the top three turnaround occupations in the Study Area are Construction millwrights and industrial mechanics (NOC 72400), Production and transportation logistics coordinators (NOC 13201) and Central control and process operators, petroleum, gas and chemical processing (NOC 93101).

Top 10 Next Turnaround Occupations⁵⁸

NOC Code	Occupation Title	# of turnaround type workers	% of turnaround workers
72400	Construction millwrights and industrial mechanics	1,580	61.1%
13201	Production and transportation logistics coordinators	300	11.6%
93101	Central control and process operators, petroleum, gas and chemical processing	239	9.2%
85111	Oil and gas drilling, servicing and related labourers	100	3.9%

⁵⁷ Includes all turnaround types.

⁵⁸ Includes all turnaround types.

NOC Code	Occupation Title	# of turnaround type workers	% of turnaround workers
21221	Business systems specialists	80	3.1%
12013	Supervisors, supply chain, tracking and scheduling coordination occupations	55	2.1%
21321	Industrial and manufacturing engineers	46	1.8%
72201	Industrial electricians	34	1.3%
72301	Steamfitters, pipefitters and sprinkler system installers	33	1.3%
72106	Welders and related machine operators	24	0.9%
94140	Process control and machine operators, food and beverage processing	24	0.9%
	Other occupations	70	2.7%
Total		2,585	100%

Note: 8 employers provided a response for this question. Worker counts are not scaled; they are based on the number of workers and noted occupations as reported in the survey.

EXPANSION

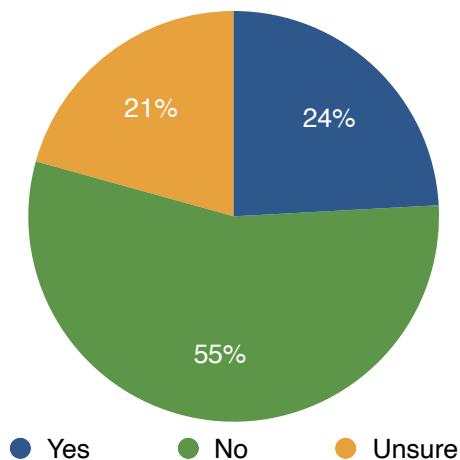
Employers were asked if they are currently completing or planning an expansion of their operations. Expansion refers to a new industrial project proposed or under construction.

EXPANSION OF OPERATIONS

Seven employers (24%) said their organization is completing or planning an expansion of their operations.

Sixteen employers (55%) reported that their organization is not currently completing or planning an expansion of operations, while 6 (21%) were unsure.

Are you currently completing or planning an expansion of your operations?



Note: 29 employers provided a response for this question.

Selected comments about expansions from employers are below:

- ▶ Fort Saskatchewan Path 2 Zero
- ▶ Building in Fort McMurray. Opened facility in Calgary. Will likely expand in Fort Saskatchewan in the next few years.

EXPANSION TIMELINE

Of the employers who reported on expansion timelines, 5 will be expanding this year (2024), 2 will be expanding in 2026, and 1 plans to expand in 2027.

When are you planning an expansion of your operations?

Timeline	# of employers expanding	% of employers expanding
2024	5	62.5%
2026	2	25.0%
2027	1	12.5%
Total	8	100%

Note: 8 employers provided a response for this question.

EXPANSION WORKFORCE BY INDUSTRY

Based on the survey responses, an estimated total of 7,590 workers will be added as a result of expansions occurring in the Study Area between 2024 and 2027.⁵⁹

The majority of the workforce additions have been reported to be in Manufacturing (99.6%).

How many workers are expected to be required to complete this expansion project?

Industry (NAICS)	# of employers expanding	% of employers expanding	# of expansion workers	% of expansion workers
Manufacturing (31-33)	3	60.0%	7,560	99.6%
Mining, quarrying, and oil and gas extraction (21)	0	0.0%	0	0.0%
Transportation and warehousing (48-49)	2	40.0%	28	0.4%
Construction (23)	0	0.0%	0	0.0%
Total	5	100%	7,588	100%

Note: 5 employers provided a response for this question. Due to low response rate, worker counts are not scaled; they are based on the number of workers and noted industries as reported in the survey.

EXPANSION WORKFORCE BY WORKER CATEGORY

Survey respondents reported that 7,285 (96%) of the workers for expansion projects will be Construction workers and 305 (4%) will be Operations workers.⁶⁰

How many will be project construction workers? What will the operations employment impacts be?

Worker Category	# of expansion workers	% of expansion workers
Construction	7,285	96.0%
Operations	305	4.0%
Total	7,590	100%

Note: 5 employers provided a response for this question. Due to low response rate, worker counts are not scaled; they are based on the number of workers as reported in the survey.

⁵⁹ Expansion workforce does not include those workers involved in current operations activities or turnaround maintenance. The worker counts in for this question are not scaled due to low response rate.

⁶⁰ One employer did not specify how many workers will be required to complete its expansion project.

TOP EXPANSION OCCUPATIONS

Employers were asked in what occupations they expect to employ the most construction and operations workers in to complete their expansion project.

According to the two employers who participated in the survey, the top expansion occupations in the Study Area are Civil engineers (NOC 21300), Railway yard and track maintenance workers (NOC 74200), Heavy-duty equipment mechanics (NOC 72401), and Transport truck drivers (73300).

In what occupations do you expect to employ the most workers (construction and operations) to complete this project?

NOC Code	Occupation Title	# of expansion workers
21300	Civil engineers	10
74200	Railway yard and track maintenance workers	10
72401	Heavy-duty equipment mechanics	4
73300	Transport truck drivers	4

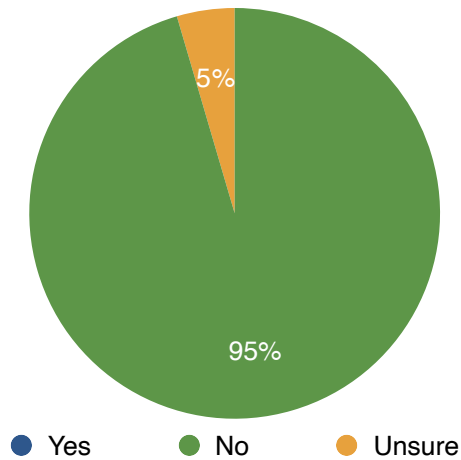
Note: 2 employers provided a response for this question. Due to low response rate, worker counts are not scaled; they are based on the number of workers and noted occupations as reported in the survey.

DOWNSIZE

Employers not planning an expansion were asked if they are planning on downsizing their operations or changing the scope of their operations in the foreseeable future.

All but 1 employer reported that their organization is not planning on downsizing. One employer (5%) was Unsure.

Are you planning on downsizing your operations or changing the scope of your operations in the foreseeable future?

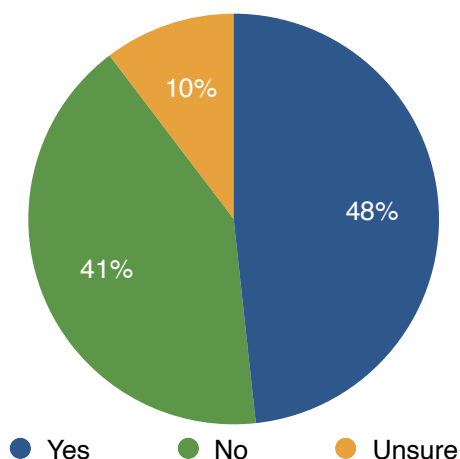


Note: 22 employers provided a response for this question.

VACANT POSITIONS

Fourteen (48%) employers reported that their organization currently has vacant positions they are actively recruiting for, while 12 (41%) said their organization does not have vacant positions they are actively recruiting for.

Do you currently have vacant positions you are actively recruiting for?



Note: 29 employers provided a response for this question.

VACANCY RATE

Based on the 13 employers who responded to this question, a total of approximately 487 vacant positions were currently identified for the four industry groups in the Study Area. The overall vacancy rate was 2.6%.

Mining, quarrying, and oil and gas extraction employers reported the highest vacancy rate at 9.3%, followed by Manufacturing with a vacancy rate of 3.8%, Transportation and warehousing with a vacancy rate of 1.1%, and Construction with a vacancy rate of 0.9%

How many total vacant positions are you actively recruiting for?

Industry (NAICS)	# of vacant positions	Total Workers	Vacancy Rate
Transportation and warehousing (48-49)	2	187	1.1%
Manufacturing (31-33)	6	153	3.8%
Construction	1	108	0.9%
Mining, quarrying, and oil and gas extraction (21)	4	39	9.3%
Total	13	487	2.6%

Note: 13 employers provided a response for this question.

VACANT POSITIONS BY OCCUPATION

Employers were asked what occupations they are actively recruiting for. Occupations with 5 or more vacant positions are shown in the table below.

According to the employers who participated in the survey, the top three vacant positions in the Study Area are Heavy-duty equipment mechanics (NOC 72401), Transport truck drivers (NOC 73300) and Power engineers and power systems operators (NOC 92100).

What occupations are you actively recruiting for?

NOC Code	Occupation Title	# of vacant positions
72401	Heavy-duty equipment mechanics	156
73300	Transport truck drivers	112
92100	Power engineers and power systems operators	36
72106	Welders and related machine operators	31
70012	Facility operation and maintenance managers	16
62100	Technical sales specialists - wholesale trade	13
95109	Other labourers in processing, manufacturing and utilities	13
22232	Occupational health and safety specialists	7
73201	General building maintenance workers and building superintendents	7
93100	Central control and process operators, mineral and metal processing	6
72201	Industrial electricians	5

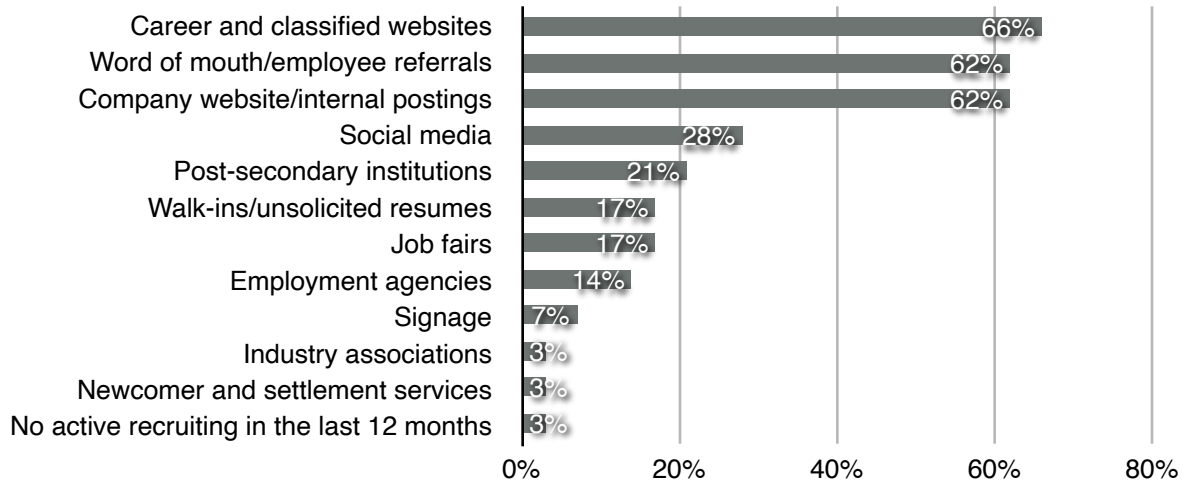
Note: 13 employers provided a response for this question.

RECRUITMENT STRATEGIES

The most successful recruitment strategy to find applicants over the last 12 months was Career and classified websites (66% of employers who responded). Of those 19 employers who said Career and classified websites, 10 specified that the Indeed website was the most successful.

Another 62% of employers reported both Word of mouth/employee referrals and Company website/internal postings as the next most successful recruitment strategies. Social media was cited by 28% of employers, with the most commonly cited social media site (7 employers) being LinkedIn.

What has been your most successful recruitment strategy to find applicants over the last 12 months? (Check all that apply)



Note: 29 employers provided a response for this question.

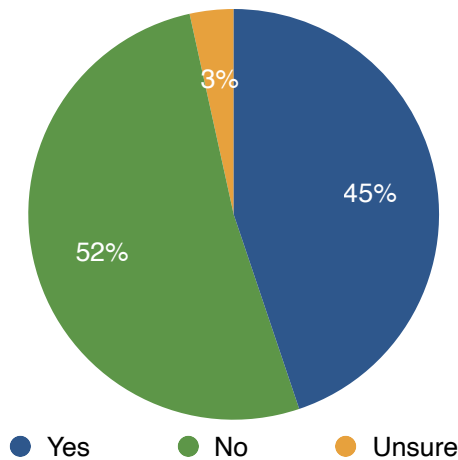
RECRUITMENT DIFFICULTIES

Employers were asked questions about their past recruiting difficulties and expectations about future recruiting difficulties.

PAST RECRUITING DIFFICULTIES IN THE LAST 12 MONTHS

Fifteen employers (52%) reported that their organization has not had difficulty recruiting qualified workers in the last 12 months, while 13 employers (45%) said their organization has had difficulty recruiting qualified workers in the last 12 months. One employer (3%) was unsure about past recruiting difficulties.

Have you had difficulty recruiting qualified workers in the last 12 months



Note: 29 employers provided a response for this question.

Selected comments from employers with past recruiting difficulties in the last 12 months are below:

- ▶ Location: Challenges in attracting workers to rural locations; lack of local amenities for families
- ▶ Work Environment: Work place not desirable (e.g. plant); labour intensive positions; sporadic work schedule
- ▶ Applicants / Candidates: Not a deep talent pool of qualified candidates; positions are in high demand and not enough supply of workers to fill positions; applicants lacking education, training, skills and /or experience for positions; language barriers
- ▶ Compensation: Wage expectations; rate of pay
- ▶ Retaining Workers: Workers not showing up to work; transient workers motivated by next best job or pay; workers not wanting to work in labour intensive jobs.

Selected comments from employers without past recruiting difficulties in the last 12 months are below:

- ▶ Not typically. Professional Engineers are typically the most difficult to get in the early career (4-7 years of experience), but you can find engineers with more or less experience.

DIFFICULT TO FILL POSITIONS BY OCCUPATION

The 13 employers who reported difficulty recruiting qualified workers in the last 12 months were asked which occupations have been most difficult to fill.

The complete list of most difficult to fill positions reported by employers who participated in the survey is below.

Which occupations have been most difficult to fill?

NOC Code	Occupation Title	# of employers who reported
12101	Human resources and recruitment officers	1
21120	Public and environmental health and safety professionals	1
21321	Industrial and manufacturing engineers	1
64101	Sales and account representatives - wholesale trade (non-technical)	1
72106	Welders and related machine operators	1
72201	Industrial electricians	1
72301	Steamfitters, pipefitters and sprinkler system installers	1
72400	Construction millwrights and industrial mechanics	1
72401	Heavy-duty equipment mechanics	1
73300	Transport truck drivers	1
74200	Railway yard and track maintenance workers	1
82020	Supervisors, mining and quarrying	1
85111	Oil and gas drilling, servicing and related labourers	1
95100	Labourers in mineral and metal processing	1
95109	Other labourers in processing, manufacturing and utilities	1

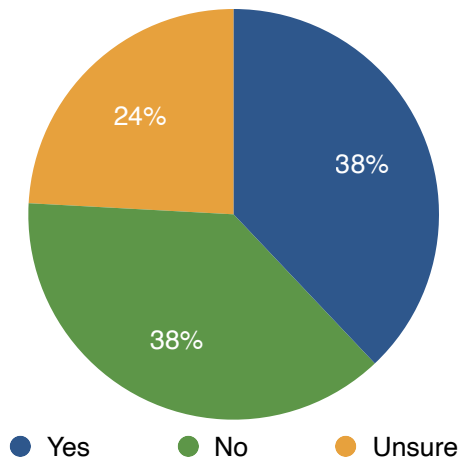
Note: 12 employers provided a response for this question.

FUTURE RECRUITING DIFFICULTIES IN THE NEXT 12 MONTHS

Eleven employers (38%) reported they do not expect recruiting qualified workers to be more difficult for their organization in the next 12 months and 7 employers (24%) were unsure.

Eleven employers (38%) said their organization will face more difficulty recruiting qualified workers in the next 12 months.

Do you expect recruiting qualified workers to be more difficult in the next 12 months?



Note: 29 employers provided a response for this question.

Selected comments from employers expecting more recruiting difficulties in the next 12 months are below:

- ▶ Competitive labour market with large petrochemical construction projects and lots of shutdowns in the Alberta Industrial Heartland Area
- ▶ Tight labour market pushing wages and demands higher
- ▶ Older mechanics reaching retirement and fewer workers interested in rural location
- ▶ Lack of qualified workers in skilled trades

Selected comments from employers not expecting more recruiting difficulties in the next 12 months are below:

- ▶ Energy industry is attractive to applicants
- ▶ Seeing a greater supply of high calibre candidates, likely due to layoffs at other companies
- ▶ Company is smaller and recruiting needs should be easily met
- ▶ Past hiring practices have proven successful
- ▶ Positions are entry level and training provided
- ▶ Increasing rate of pay and trying new hiring strategies

Selected comments from employers reporting they were unsure about recruiting difficulties in the next 12 months are below:

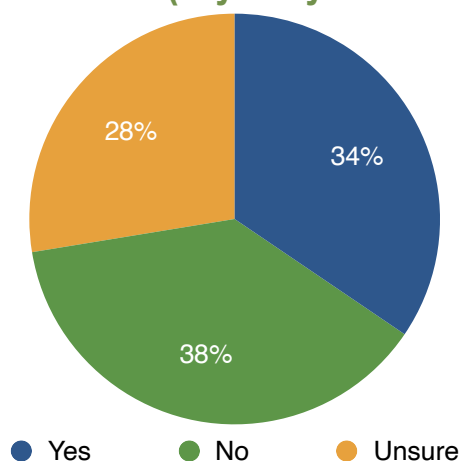
- ▶ Unemployment appears to be rising which should help, but there is still not a deep pool of talent in Alberta to recruit from.
- ▶ It's currently an employees' market and there are a number of projects coming online in the region. It is going to get tight to find "qualified" workers.
- ▶ We plan to use internal growth-succession planning and more social media.

FUTURE RECRUITING DIFFICULTIES FARTHER INTO THE FUTURE

Eleven employers (38%) reported they do not expect recruiting qualified workers to be more difficult for their organization farther into the future and 8 employers (28%) were unsure.

Ten employers (34%) said their organization will face more difficulty recruiting qualified workers farther into the future.

Do you expect recruiting qualified workers to be more difficult farther into the future (say 1-2 years from now)?



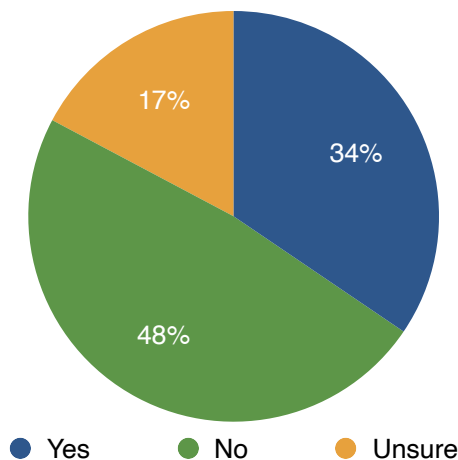
Note: 29 employers provided a response for this question.

RECRUITING DIFFICULTIES DUE TO LOCATION

Fourteen employers (48%) reported that their organization's locations in the Northeast Edmonton region do not affect their ability to successfully recruit qualified workers and 5 employers (17%) were unsure.

Ten employers (34%) said it does affect their organization's ability to successfully recruit.

Does your location or operations in the northeast Edmonton region affect your ability to successfully recruit qualified workers?



Note: 29 employers provided a response for this question.

Selected comments from employers who said their locations in the northeast Edmonton region affect their ability to recruit are below:

- ▶ At times this does present difficulty, based on location (outside of city, distance from bigger centers)
- ▶ Rural is very difficult to recruit, despite wages being higher than the city
- ▶ Commute is often the biggest hurdle for workers. There is also not really the same pull/attraction that downtown Edmonton would have
- ▶ There are transport issues from Edmonton to Fort Saskatchewan which makes it difficult for applicants to attend training prior to hiring

Selected comments from employers who said their locations in the northeast Edmonton region do not affect their ability to recruit are below:

- ▶ Situated close enough to major feeders, Edmonton (North) , Sherwood Park and Fort Saskatchewan.
- ▶ Fort Saskatchewan, agri-trade technicians are resident rural proximity
- ▶ There are a lot of qualified workers that are willing to bring their skills and experience to new companies
- ▶ Company is competitive in its offerings
- ▶ If it did, transit stops are not close to the facility.

RESPONSES TO RECRUITING DIFFICULTIES

Employers have responded to the difficulty finding qualified employees in a variety of ways. Increased recruiting efforts, Increased workload for current workers, and Hiring less qualified applicants were the top cited responses.

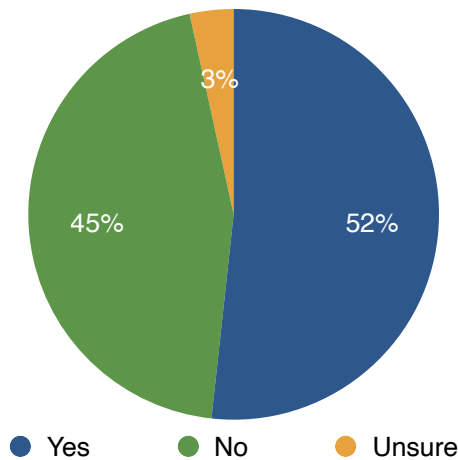
How have or will you respond to the difficulty recruiting qualified workers? (Check all that apply)

Response to hiring difficulties	# of employers who reported
Increased recruiting efforts	19
Increased workload for current workers	10
Hired a less qualified applicant	8
Increased wages/benefits to attract more applicants	8
Hired contingent workers, such as contractors	7
Redeployed employees to new roles where their skills were more needed	6
Outsourced the work	6
Increased investment in training	5
Partnered with educational institutions	5
Redesigned the job to change the required skills	5
Did not fill the job opening	4
Targeted under-utilized or new talent pools	4
Applied for/hired temporary foreign workers	1
Other (Specify)	1
Note: 26 employers provided a response for this question.	

VOLUNTARY TURNOVER

Fifteen (52%) of the employers reported that workers left their organization in the last 12 months as a result of voluntary turnover, while 13 (45%) said no workers left their organization in the last 12 months as a result of voluntary turnover.

Have any workers left your organization in the last 12 months as a result of voluntary turnover?



Note: 29 employers provided a response for this question.

Selected comments from employers about voluntary turnover are below:

- ▶ Personal Reasons
- ▶ Three great mechanics were commuting from Edmonton and Thorhild and decided the commute was too much
- ▶ Mostly due to family reasons and some for better paying opportunities

VOLUNTARY TURNOVER RATE

Based on the 14 employers responding to this question, approximately 545 workers left their organizations in the Study Area in the last 12 months as a result of voluntary turnover. The overall voluntary turnover rate was 2.1%.

Mining, quarrying, and oil and gas extraction employers reported the highest vacancy rate at 6.4%, representing a total of 219 voluntary turnover positions. This was followed by Manufacturing with a vacancy rate of 2.9% and Transportation and warehousing with a vacancy rate of 1.8%.⁶¹

How many workers have left your organization as a result of voluntary turnover in the last 12 months?

Industry (NAICS)	# of voluntary turnover positions	Total Workers	Voluntary Turnover Rate
Transportation and warehousing (48-49)	75	4,222	1.8%
Mining, quarrying, and oil and gas extraction (21)	219	3,399	6.4%

⁶¹ Voluntary turnover rate is the number of voluntary turnover positions divided by the number of total workers.

Industry (NAICS)	# of voluntary turnover positions	Total Workers	Voluntary Turnover Rate
Manufacturing (31-33)	251	8,621	2.9%
Construction (23)	0	9,302	0.0%
Total	545	25,544	2.1%

Note: 14 employers provided a response for this question.

VOLUNTARY TURNOVER POSITIONS BY OCCUPATION

Employers were asked which occupations experienced the most voluntary turnover.

According to the employers who participated in the survey, the top three voluntary turnover positions in the Study Area are Central control and process operators, petroleum, gas and chemical processing (NOC 93101), Labourers in mineral and metal processing (NOC 95100) and Machine operators, mineral and metal processing (NOC 94100).

Which occupations experienced the most voluntary turnover?

NOC Code	Occupation Title	# of voluntary turnover positions
93101	Central control and process operators, petroleum, gas and chemical processing	68
95100	Labourers in mineral and metal processing	66
94100	Machine operators, mineral and metal processing	65
72400	Construction millwrights and industrial mechanics	56
21320	Chemical engineers	26
74200	Railway yard and track maintenance workers	20
22232	Occupational health and safety specialists	10
22312	Industrial instrument technicians and mechanics	10
94112	Rubber processing machine operators and related workers	10
64101	Sales and account representatives - wholesale trade (non-technical)	7
12101	Human resources and recruitment officers	3
14400	Shippers and receivers	3

NOC Code	Occupation Title	# of voluntary turnover positions
75101	Material handlers	3

Note: 13 employers provided a response for this question.

RETIREMENTS

Twenty-five employers provided information about their operations workforce they expect to lose to retirement in the next five years, representing an estimated total of 15,843 workers.

Approximately 879 (5.5%) operations workers are anticipated to retire in the next five years.

What proportion of your operations workforce are you expecting to lose to retirement in the next five years?

Worker Category	# of operations workers	% of operations workers
Anticipated retirements	879	5.5%
Remaining operations workforce	14,964	94.5%
Total	15,843	100%

Note: 25 employers provided a response for this question.

RETIREMENT POSITIONS BY OCCUPATION

Employers were asked which occupations are most likely to be affected by retirements

Which occupations are most likely to be most affected by retirements?

NOC Code	Occupation Title	# of employers who reported
12101	Human resources and recruitment officers	1
14100	General office support workers	1
14400	Shippers and receivers	1
14404	Dispatchers	1
60020	Retail and wholesale trade managers	1
64101	Sales and account representatives - wholesale trade (non-technical)	1

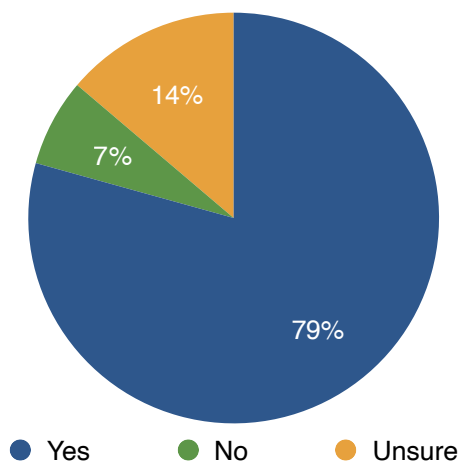
NOC Code	Occupation Title	# of employers who reported
70010	Construction managers	1
70020	Managers in transportation	1
72106	Welders and related machine operators	1
72400	Construction millwrights and industrial mechanics	2
73300	Transport truck drivers	1
74200	Railway yard and track maintenance workers	1
85111	Oil and gas drilling, servicing and related labourers	1
93101	Central control and process operators, petroleum, gas and chemical processing	1
94112	Rubber processing machine operators and related workers	1
95100	Labourers in mineral and metal processing	1

Note: 19 employers provided a response for this question.

SUCCESSION PLANS

Twenty-three employers (79%) reported that their organization has developed a succession plan to address the anticipated retirements, while 2 (7%) said their organization had not. Four employers (14%) were unsure.

Has your organization developed a succession plan to address the anticipated retirements?



Note: 29 employers provided a response for this question.

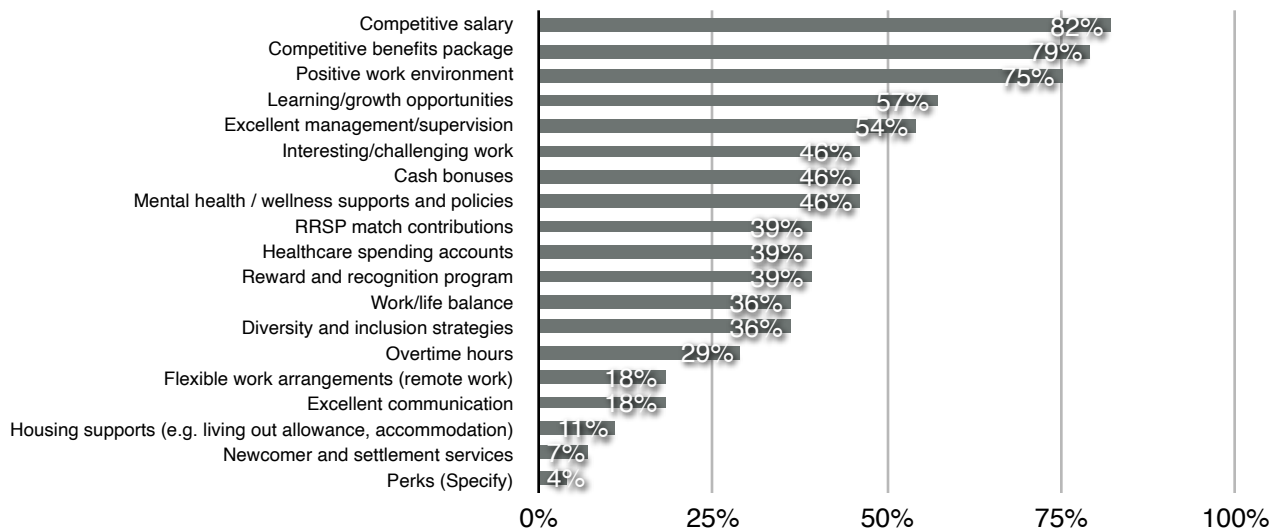
Selected comment from employers with succession plans are below:

- ▶ Succession plans for senior critical positions
- ▶ Training new employees is a time consuming process. Looking to have a pool of qualified internal candidates ready to step into higher roles.
- ▶ Hiring ahead of attrition for most roles
- ▶ In process for all positions

RETENTION STRATEGIES

The most successful worker retention strategy over the last 12 months was Competitive salary (82% of employers who responded). Next cited top successful retention strategies include Competitive benefits package (79%) and Positive work environment (75%). Rounding out the top five responses is Learning / growth opportunities (57%) and Excellent management / supervision (54%).

What has been your most successful worker retention strategy over the last 12 months? (Check all that apply)



Note: 28 employers provided a response for this question.

Selected comment from employers about worker retention strategies are below:

- ▶ Perks: Lots of food.

WORKPLACE RESOURCES

Employers were asked about their involvement with various workplace resources. Workplace resources are government funding programs that employers and their workers can access.

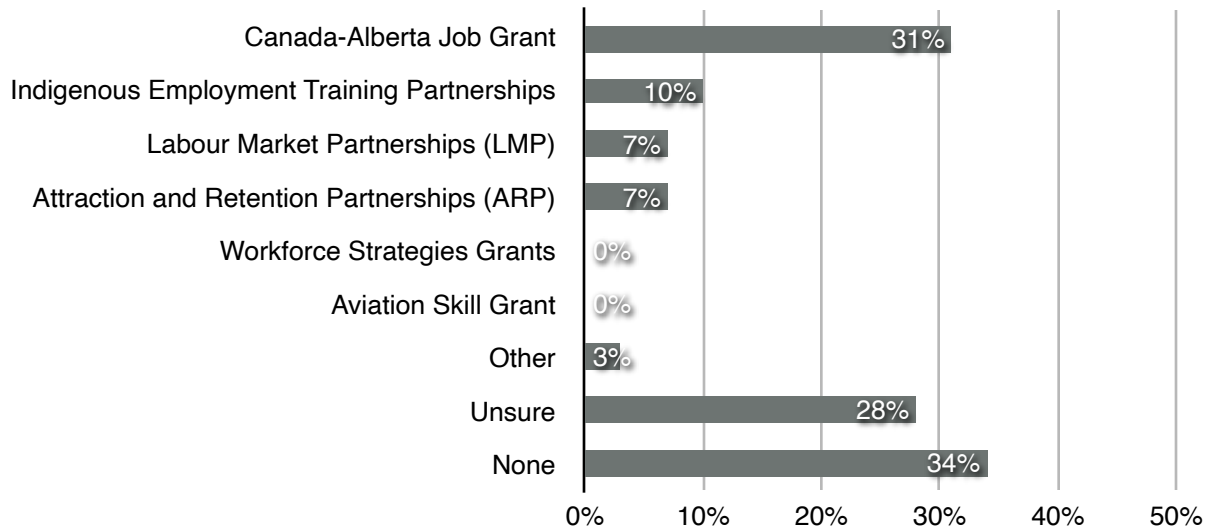
APPLYING FOR WORKPLACE RESOURCES

Nine employers (31% of employers who responded) identified applying for or having plans to apply for the Canada-Alberta Job Grant, 3 (10%) identified Indigenous Employment Training Partnerships,

and 2 (7%) each identified Labour Market Partnerships (LMP) and Attraction and Retention Partnerships (ARP). No employers reported accessing the Workplace Training Program or the Aviation Skill Grant.

Eight (28%) were unsure of whether their company applied for workplace resources, and 10 (34%) indicated they have not applied or have plans to apply to any workplace resources.

Has your company ever applied for or does your company have plans to apply for any of the following workplace resources? (Check all that apply)



Note: 29 employers provided a response for this question.

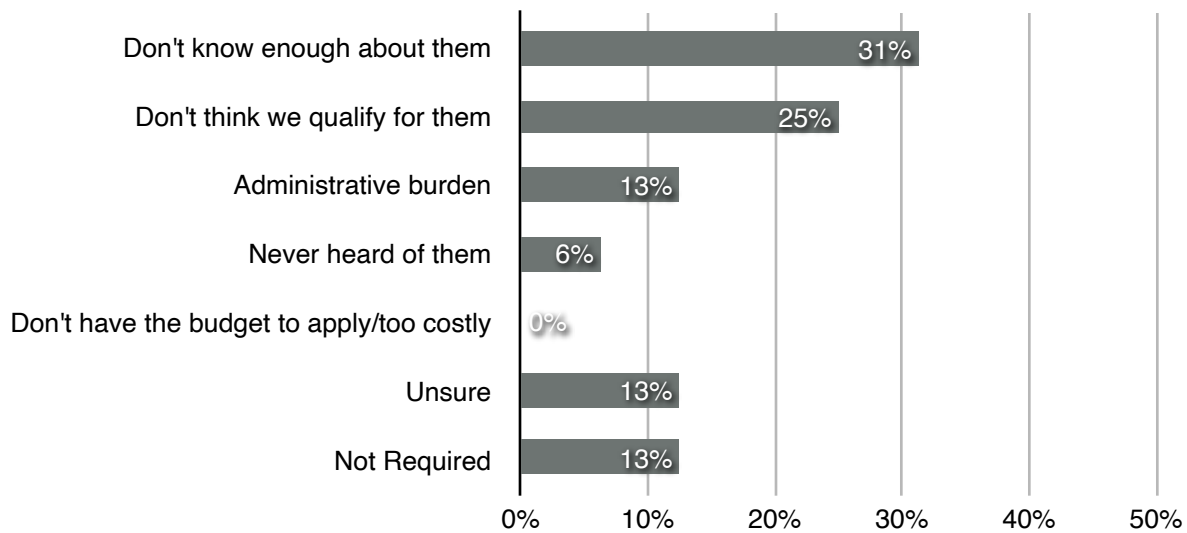
REASONS FOR NOT APPLYING FOR WORKPLACE RESOURCES

The 18 employers who reported they either have never applied and have no plans to apply for any workplace resources or were unsure whether they applied or have plans to apply were asked to provide reasons.

Five employers (31%) said they Don't know enough about them. Four (25%) reported they Don't think we qualify for them, and 2 (13%) cited Administrative burden as a reason.

Two (13%) were unsure the reason for not applying and two (13%) reported they did not require these resources.

What are the reasons your company has never applied for or does not have plans to apply for any workplace resources?(Check all that apply)



apply)

Note: 16 employers provided a response for this question.

TECHNOLOGICAL CHANGE

Employers were asked about their plans to implement or adopt any technological changes in the next two years that will affect their operations workforce.⁶²

In order to be included in the survey, the technological change must affect the operations workforce in one or more of the following ways:

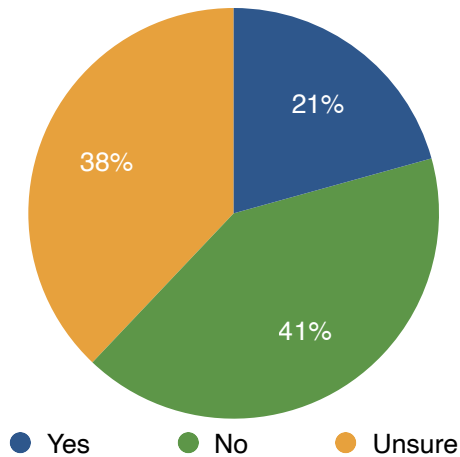
- ▶ Increase or decrease the number of workers
- ▶ Change the nature of work so as to require skill upgrading
- ▶ Change the nature of work so as to completely change the job description

IMPLEMENTING OR ADOPTING TECHNOLOGICAL CHANGE

Six employers (21%) reported their organization is planning on implementing or adopting technological changes in the next two years that will affect their operations workforce in the Study Area, while 12 (41%) reported their organization is not. Eleven employers (38%) were unsure.

⁶² Operations workforce does not include those workers involved in turnaround maintenance or new construction projects.

Is your company planning on implementing or adopting any technological changes in the next two years that will affect your operations workforce?



Note: 29 employers provided a response for this question.

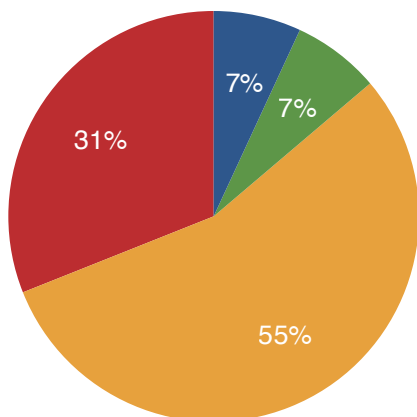
OPERATIONS WORKFORCE EMPLOYMENT CHANGES

Two employers (7%) reported their organization is planning on implementing or adopting technological changes in the next two years that will Increase their operations workforce.

Two employers (7%) reported their organization is planning on implementing or adopting technological changes in the next two years that will Decrease their operations workforce.

Sixteen (55%) said their operations workforce will Stay the same with respect to the impacts of technological change and 9 (31%) were Unsure.

Do you anticipate the implementation or adoption of any technological changes to increase or decrease your operations workforce?



● Increase ● Decrease ● Stay the same ● Unsure

Note: 29 employers provided a response for this question.

OPERATIONS WORKFORCE EMPLOYMENT CHANGES

There was insufficient survey data to meaningfully report on the change in the number of workers in the Study Area as a result of technological changes.⁶³

Note: 0 employers provided a response for the question on the increase in number of workers. 1 employer provided a response for the question on the decrease in the number of workers.

OPERATIONS WORKFORCE EMPLOYMENT CHANGES BY OCCUPATION

There was insufficient survey data to meaningfully report on the change in the number of workers by occupation in the Study Area as a result of technological changes.⁶⁴

Note: 0 employers provided a response for the question on the increase in number of workers by occupation. 1 employer provided a response for the question on the decrease in the number of workers by occupation.

OPERATIONS SKILL UPGRADING

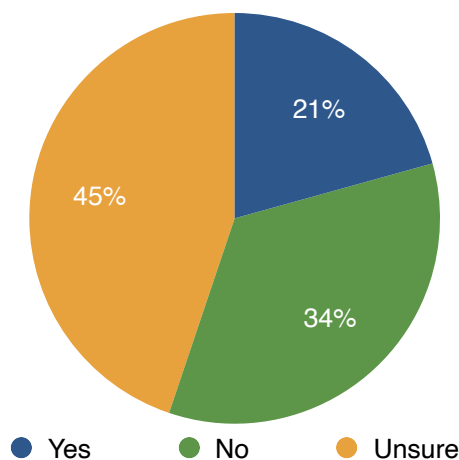
Six employers (21%) reported their organization is planning on implementing or adopting technological changes in the next two years that will change the nature of work so as to require skill upgrading.

⁶³ There was no survey data to report on the increase in the number of workers as a result of technological changes. Only one employer responded to the decrease in the number of workers with 3 workers (raw survey data).

⁶⁴ There was no survey data to report on the increase in the number of workers by occupation as a result of technological changes. Only one employer responded to the decrease in the number of workers by occupation: manufacturing with 3 workers (raw survey data).

Ten (34%) reported their organization is not planning on implementing or adopting technological changes in the next two years that will change the nature of work so as to require skill upgrading. Thirteen employers (45%) were unsure.

Do you anticipate the implementation or adoption of any technological changes to change the nature of work so as to require skill upgrading?



Note: 29 employers provided a response for this question.

Selected comments from employers about skill upgrading changes are below:

- ▶ Will be dependent on opportunities presented
- ▶ More time proactively solving and strategizing
- ▶ Training will be made available to all employees impacted by any technology changes

OPERATIONS SKILL UPGRADING BY OCCUPATION

The 6 employers who reported an operations skill upgrading change were asked to describe the technological change, the occupations that will have to upgrade their skills, and how many workers will be affected.

According to the employers who participated in the survey, a total of 157 workers will have to upgrade their skills to successfully implement or adopt technological changes.⁶⁵

The complete list of occupations that will have to upgrade their skills is shown below. According to the employers who participated in the survey, the top three occupations requiring skills upgrading as a result of technological change are Sales and account representatives - wholesale trade (non-technical) (NOC 64101), Construction millwrights and industrial mechanics (NOC 72400), and Machine operators, mineral and metal processing (NOC 94100).

⁶⁵ One employer did not specify which occupations will have to upgrade their skills or how many workers will be affected.

Please describe the technological changes, the occupations that will have to upgrade their skills, and how many workers will be affected.

NOC Code	Occupation Title	# of workers requiring skill upgrading
64101	Sales and account representatives - wholesale trade (non-technical)	81
72400	Construction millwrights and industrial mechanics	56
94100	Machine operators, mineral and metal processing	13
94112	Rubber processing machine operators and related workers	7

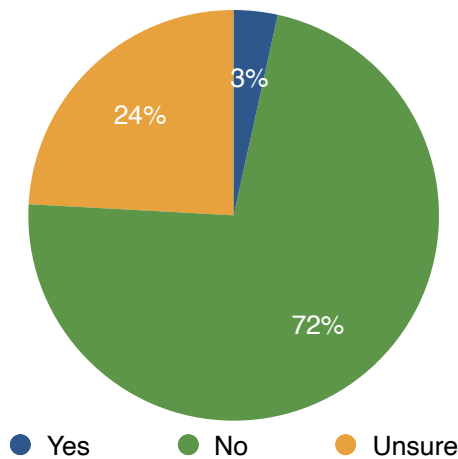
Note: 4 employers provided a response for this question.

OPERATIONS JOB DESCRIPTION CHANGES

Twenty-one employers (72%) reported their organization is not planning on implementing or adopting technological changes in the next two years that will change the nature of work so as to completely change the job description. Seven employers (24%) were Unsure.

Only 1 employer (3%) reported their organization is planning on implementing or adopting technological changes in the next two years that will change the nature of work so as to completely change the job description.

Do you anticipate the implementation or adoption of any technological changes to change the nature of work so as to completely change the job description?



Note: 29 employers provided a response for this question.

OPERATIONS WORKFORCE JOB DESCRIPTION CHANGES

There was insufficient survey data to meaningfully report on the number of workers in the Study Area that could experience a change in their job description as a result of technological changes.⁶⁶

Note: 1 employer provided a response for this question.

OPERATIONS WORKFORCE JOB DESCRIPTION CHANGES BY OCCUPATION

No survey data reported for this section.

Note: 0 employers provided a response for this question.

WORK ARRANGEMENTS

Employers were asked about flexible work arrangements they had in place.

FLEXIBLE WORK ARRANGEMENTS

Employers were asked to identify what types of flexible work arrangements they had in the workplace.

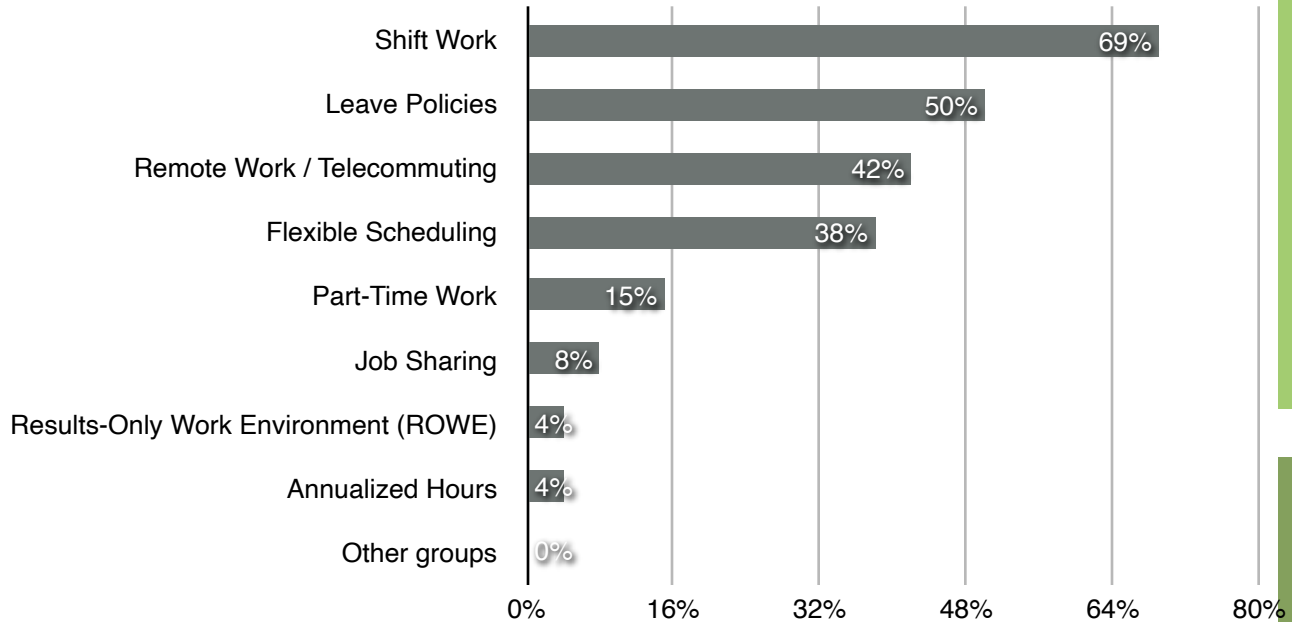
- ▶ Shift Work: For roles that require 24/7 coverage, such as in healthcare or manufacturing, shift work allows for work outside the traditional 9-to-5 hours.
- ▶ Leave Policies: Enhanced leave policies for circumstances like maternity/paternity leave, sabbaticals, or extended unpaid leave for personal reasons.

⁶⁶ Only one employer responded to this question with 2 workers (raw survey data).

- ▶ Remote Work / Telecommuting: Employees work from a location outside the traditional office, often from home. This arrangement can be full-time, part-time, or as needed.
- ▶ Flexible Scheduling: This includes a variety of options. (1) Flextime - Employees have the freedom to choose their start and end times while working the required number of hours. (2) Compressed workweek - Working longer hours on some days and fewer on others, often resulting in an extra day off per week. (3) Staggered hours - Different start and end times for employees to reduce crowding or support work-life balance.
- ▶ Part-Time Work: Working fewer hours than the standard full-time schedule, often with proportional salary and benefits.
- ▶ Job Sharing: Two or more employees share the responsibilities of one full-time position, often splitting the hours and pay.
- ▶ Results-Only Work Environment (ROWE): Employees are evaluated based on their output and results rather than the number of hours worked. This approach offers high flexibility in terms of when and where work is completed.
- ▶ Annualized Hours: The total number of work hours for the year is agreed upon, but there is flexibility in how those hours are distributed across the year.
- ▶ Unlimited Paid Time Off (PTO): Some companies offer unlimited PTO, allowing employees to take time off at their discretion, as long as their work is completed.

Of these arrangements, the top 5 most common offerings are Shift Work (69% of employers who responded), Leave Policies (50%), Remote Work / Telecommuting (42%), Flexible Scheduling (38%), and Part-Time Work (15%).

What types of flexible work arrangements are offered? (Check all that apply)



Note: 26 employers provided a response for this question.

REMOTE WORK

Twenty-nine employers provided information on the proportion of their workforce currently working remotely, representing an estimated total of 21,108 workers.

Approximately 1,581 (7.5%) workers are currently working remotely.

What proportion of your workforce is currently working remotely?

Worker Category	# of operations workers	% of operations workers
Working Remotely	1,581	7.5%
Remaining operations workforce	19,527	92.5%
Total	21,108	100%

Note: 29 employers provided a response for this question.

Twenty-nine employers also provided information on the proportion of their workforce that worked remotely before the COVID pandemic, representing an estimated total of 21,108 workers.

Approximately 754 (3.6%) workers worked remotely before the COVID pandemic. This represents approximately half (48%) of the workforce currently working remotely.

What proportion of your workforce was working remotely before the pandemic?

Worker Category	# of operations workers	% of operations workers
Working Remotely	754	3.6%
Remaining operations workforce	20,354	96.4%
Total	21,108	100%

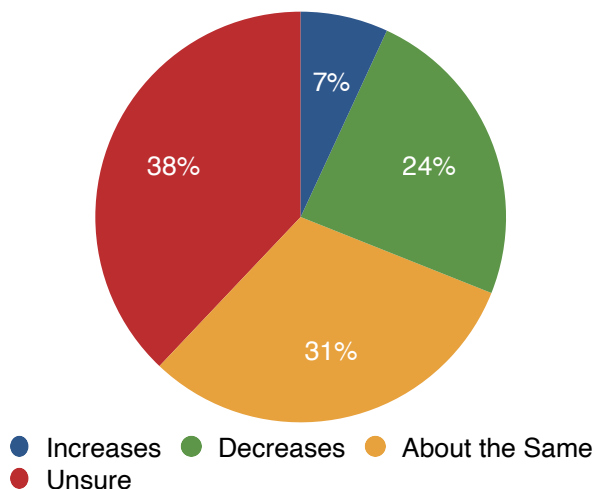
Note: 29 employers provided a response for this question.

REMOTE WORK PRODUCTIVITY

Twenty-nine employers provided information on the the impacts of remote work on perceived worker productivity.

Eleven employers (38%) reported they were unsure of the impact of remote work on productivity. Nine employers (31%) indicated that productivity was about the same with remote work, followed by seven employers (24%) indicating remote work resulted in a decrease in productivity.

Do you generally notice that production increases, decreases, about the same with remote work?



Note: 29 employers provided a response for this question.

REMOTE WORK BY OCCUPATION

Employers were asked which occupations are most likely offered a remote work arrangement. A listing of the occupations reported are summarized in the following table.

What occupations in your firm are currently offered/to work remotely?

NOC Code	Occupation Title	# of employers who reported
00012	Senior managers - financial, communications and other business services	1
10019	Other administrative services managers	2
12013	Supervisors, supply chain, tracking and scheduling coordination occupations	1
13102	Payroll administrators	1
14100	General office support workers	1
14200	Accounting and related clerks	1
22232	Occupational health and safety specialists	1
64101	Sales and account representatives - wholesale trade (non-technical)	1
70020	Managers in transportation	1
72400	Construction millwrights and industrial mechanics	1
93101	Central control and process operators, petroleum, gas and chemical processing	1

Note: 9 employers provided a response for this question.

DIVERSITY RECRUITMENT

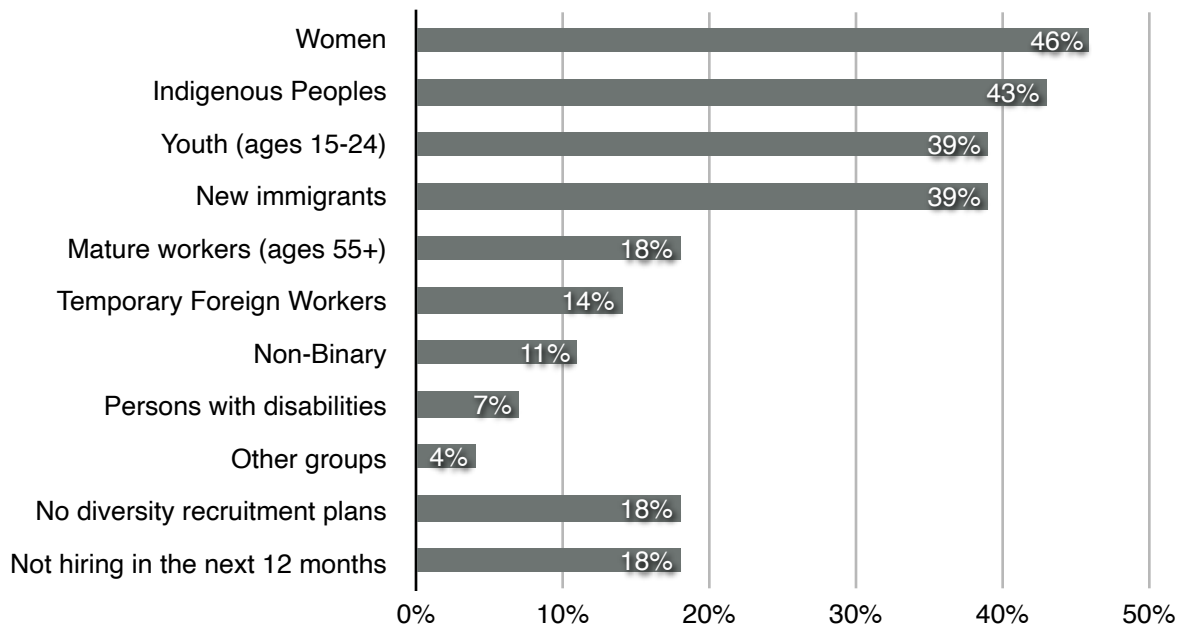
Employers were asked about their organization's diversity recruitment.

DIVERSITY RECRUITMENT PLANS

Twenty-eight employers (78% of total survey respondents) reported plans to recruit workers from at least one of the identified groups listed in the survey questionnaire. The top five cited diversity recruitment plans include Women (46% of employers who responded), Indigenous People (43%), Youth (39%), New immigrants (39%), and Mature workers (18%).

Five employers (18%) said their organization is Not hiring in the next 12 months. Five employers (18%) said they have No diversity recruitment plans.

Does your organization have plans (formal or informal) to recruit workers from the following groups in the next 12 months? (Check all that apply)



Note: 28 employers provided a response for this question.

DIVERSITY RECRUITMENT BENEFITS

Employers who have formal or informal plans to recruit workers from diversity groups were asked to provide one important example of how employing someone from these groups has provided a tangible benefit to their organization.

Selected comments are below:

- ▶ Class I drivers are becoming very hard to find and our subcontractors find foreign workers much easier to find.
- ▶ Different ideas and a diversity of perspectives, experiences that are heterogeneous, may serve to broaden our views and specifically consider challenges/solutions from that perspective.
- ▶ Diversity in thought which is rooted in the examples provided is valued at our company. As an Innovative company we are always looking for the best and the brightest.
- ▶ Having a diverse workforce instills a strong sense of pride in our team, that people of diverse backgrounds can be highly successful as a team
- ▶ New Immigrants always willing to work.
- ▶ Provides a broader perspective and experience to the workforce
- ▶ We are constantly trying to broaden our recruiting efforts. We have recently started a new graduate business analyst program where we take university student graduates and give them a 2 year 4 department rotation role (6 months each). They have come up with really good ideas to improve processes and find efficiencies in the way we operate.

- ▶ We have always prided ourselves on being a multi-cultural and diverse workforce and our casual pool of employees come from all types of diverse backgrounds. It helps to create a culture of inclusion and different perspectives.
- ▶ We have been able to hire a couple of Ukrainian drivers (we have a Ukrainian native speaker on staff for training).

Appendix B: Base Year Jobs by Occupation

Base Year Study Area Total Jobs by Occupation (4 Digit NOC)⁶⁷

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
7330	7330 Transport truck and transit drivers	1,687	6.8%
7210	7210 Machining, metal forming, shaping and erecting trades	1,403	5.6%
7511	7511 Trades helpers and labourers	1,345	5.4%
7001	7001 Managers in construction and facility operation and maintenance	973	3.9%
7220	7220 Technical electrical trades and electrical power line and telecommunications workers	952	3.8%
9510	9510 Labourers in processing, manufacturing and utilities	747	3.0%
7230	7230 Plumbers, pipefitters and gas fitters	742	3.0%
7240	7240 Machinery and transportation equipment mechanics (except motor vehicles)	676	2.7%
7231	7231 Carpenters and cabinetmakers	679	2.7%
7201	7201 Contractors and supervisors, technical industrial, electrical and construction trades and related workers	666	2.7%
7510	7510 Longshore workers and material handlers	624	2.5%
7340	7340 Operators, drillers and blasters	566	2.3%
9001	9001 Managers in manufacturing and utilities	495	2.0%
1440	1440 Supply chain logistics, tracking and scheduling coordination occupations	510	2.0%
7520	7520 Taxi, personal service and delivery service drivers	454	1.8%
1310	1310 Administrative, property and payroll officers	427	1.7%
2230	2230 Technical occupations in civil, mechanical and industrial engineering	412	1.7%
7320	7320 Building maintenance installers, servicers and repairers	400	1.6%

⁶⁷ National Occupation Classification (NOC) is a standardized system for classifying jobs for the purpose of collecting, analyzing, and publishing statistical data related to the economy and labour force. <http://noc.esdc.gc.ca/English/NOC/Welcome.aspx?ver=1.6>

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
7202	7202 Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	394	1.6%
9310	9310 Central control and process operators in processing and manufacturing	369	1.5%
7311	7311 Roofers, glaziers, painters, decorators and floor covering installers	382	1.5%
7410	7410 Mail and message distribution occupations	358	1.4%
2231	2231 Technical occupations in electronics and electrical engineering	338	1.4%
9421	9421 Furniture, wood, plastic and other products assemblers, finishers and inspectors	295	1.2%
2130	2130 Civil and mechanical engineers	291	1.2%
6410	6410 Retail salespersons and non-technical wholesale trade sales and account representatives	282	1.1%
7310	7310 Concrete finishers, tilers and plasterers	294	1.2%
9210	9210 Utilities equipment operators and controllers	277	1.1%
2223	2223 Technical inspectors and regulatory officers	281	1.1%
1410	1410 Office support and court services occupations	263	1.1%
9414	9414 Machine operators and related workers in food, beverage and associated products processing	246	1.0%
1420	1420 Financial, insurance and related administrative support workers	253	1.0%
8202	8202 Contractors and supervisors, mining, oil and gas	236	0.9%
1001	1001 Administrative services managers	220	0.9%
7232	7232 Bricklayers and insulators	213	0.9%
1110	1110 Auditors, accountants and investment professionals	203	0.8%
6531	6531 Cleaners	200	0.8%
9410	9410 Machine operators and related workers in mineral and metal products processing and manufacturing	193	0.8%
9201	9201 Supervisors, processing and manufacturing occupations	191	0.8%

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
1311	1311 Office administrative assistants - general, legal and medical	193	0.8%
1210	1210 Administrative and regulatory occupations	181	0.7%
1120	1120 Human resources and business service professionals	175	0.7%
9420	9420 Mechanical, electrical and electronics assemblers and inspectors	166	0.7%
6440	6440 Customer and information services representatives	164	0.7%
2132	2132 Manufacturing and processing engineers	161	0.6%
1320	1320 Transportation and production logistics coordinators and customs brokers and related broker occupations	160	0.6%
2001	2001 Managers in engineering, architecture, science and information systems	157	0.6%
1220	1220 Accounting, insurance and related business administrative occupations	154	0.6%
7002	7002 Managers in transportation and postal and courier services	154	0.6%
6210	6210 Technical sales specialists in wholesale trade and retail and wholesale buyers	145	0.6%
8310	8310 Underground miners, oil and gas drillers and related occupations	131	0.5%
2221	2221 Technical occupations in architecture, drafting, surveying, geomatics and meteorology	126	0.5%
7420	7420 Transport equipment operators, utility maintenance and related maintenance workers	130	0.5%
8511	8511 Mine and oil and gas drilling, services and related labourers	126	0.5%
6320	6320 Cooks, butchers and bakers	120	0.5%
7241	7241 Automotive service technicians	124	0.5%
9411	9411 Machine operators and related workers in chemical, plastic and rubber processing	119	0.5%
1201	1201 Administrative and financial supervisors	121	0.5%

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
6001	6001 Corporate sales managers	111	0.4%
8410	8410 Mine service workers and operators in oil and gas drilling	108	0.4%
6510	6510 Cashiers and other sales support occupations	106	0.4%
8001	8001 Managers in natural resources production and fishing	103	0.4%
7250	7250 Crane operators and water well drillers	102	0.4%
2131	2131 Electrical, electronics and computer engineers	90	0.4%
7260	7260 Transportation officers and controllers	91	0.4%
5212	5212 Graphic and interior designers	86	0.3%
2210	2210 Technical occupations in physical sciences	84	0.3%
2110	2110 Physical science professionals	77	0.3%
4140	4140 Policy and program researchers, consultants and officers	78	0.3%
1002	1002 Managers in financial and business services	78	0.3%
7331	7331 Train crew operating occupations	74	0.3%
2222	2222 Technical occupations in computer and information systems	70	0.3%
2133	2133 Natural resources engineers	67	0.3%
9415	9415 Printing equipment operators and related occupations	63	0.3%
6520	6520 Food support occupations	62	0.2%
2122	2122 Computer and information systems professionals	61	0.2%
2123	2123 Computer, software and Web designers and developers	58	0.2%
2112	2112 Public and environmental health and safety professionals	57	0.2%
2120	2120 Architects, urban planners and land surveyors	54	0.2%
9413	9413 Machine operators and related workers in textile, fabric, fur and leather products processing and manufacturing	51	0.2%
1411	1411 Survey, statistical and data entry occupations	52	0.2%

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
7521	7521 Water and rail transport operators and labourers and related occupations	48	0.2%
9412	9412 Machine operators and related workers in pulp and paper production and wood processing and manufacturing	45	0.2%
6431	6431 Occupations in travel and accommodation	45	0.2%
9202	9202 Supervisors, assembly and fabrication	42	0.2%
8201	8201 Supervisors, logging and forestry	39	0.2%
2111	2111 Life science professionals	32	0.1%
8512	8512 Logging, forestry, landscaping and other related labourers	34	0.1%
6002	6002 Retail and wholesale trade managers	32	0.1%
5312	5312 Occupations in creative and performing art	30	0.1%
6202	6202 Service supervisors	28	0.1%
4121	4121 College and other vocational instructors	23	0.1%
6441	6441 Security guards and related security service occupations	23	0.1%
6420	6420 Occupations in personal service	22	0.1%
1430	1430 Library, correspondence and other clerks	23	0.1%
3211	3211 Technical occupations in dental health care	22	0.1%
6201	6201 Retail sales supervisors	20	0.1%
7242	7242 Small engine and equipment mechanics and related repairers (including electrical components)	20	0.1%
5211	5211 Technical occupations in motion pictures, broadcasting and the performing arts	19	0.1%
8510	8510 Agriculture, horticulture and harvesting labourers and related occupations	15	0.1%
4210	4210 Occupations in front-line public protection services	15	0.1%
7299	7299 Other technical trades	15	0.1%
3310	3310 Assisting occupations in support of health services	15	0.1%
3212	3212 Medical technologists and technicians	13	0.1%

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
4310	4310 Assisting occupations in education	13	0.1%
3210	3210 Technical occupations in therapy and assessment	12	0.0%
8002	8002 Managers in agriculture, horticulture and aquaculture	12	0.0%
4110	4110 Judges, lawyers and Quebec notaries	11	0.0%
6003	6003 Managers in food service and accommodation	10	0.0%
6220	6220 Specialized occupations in services	9	0.0%
1003	1003 Managers in communication (except broadcasting)	8	0.0%
3130	3130 Nursing and allied health professionals	8	0.0%
8412	8412 Workers in agriculture and fishing occupations	8	0.0%
2211	2211 Technical occupations in life sciences	8	0.0%
1211	1211 Court reporters, transcriptionists, records management technicians and statistical officers	7	0.0%
6521	6521 Support occupations in accommodation, travel, tourism and amusement services	7	0.0%
5111	5111 Writing, translating and related communications professionals	7	0.0%
4220	4220 Paraprofessional occupations in legal, social, community and education services	6	0.0%
4120	4120 University professors and post-secondary assistants	6	0.0%
6310	6310 Insurance, real estate and financial sales occupations	6	0.0%
8411	8411 Logging and forestry workers	5	0.0%
4320	4320 Assisting occupations in legal and public protection	5	0.0%
6321	6321 Hairstylists and estheticians	5	0.0%
8203	8203 Contractors and supervisors, agriculture, horticulture and related operations and services	5	0.0%
6430	6430 Occupations in food and beverage service	4	0.0%
2121	2121 Mathematicians, statisticians, actuaries and data scientists	4	0.0%
6004	6004 Managers in customer and personal services	4	0.0%

NOC Code	Occupation Title	# of jobs	% of Study Area jobs
6532	6532 Service support and related occupations	3	0.0%
5311	5311 Photographers and support occupations in arts and culture	4	0.0%
2139	2139 Other engineers	3	0.0%
5320	5320 Athletes, coaches, referees and related occupations	2	0.0%
6522	6522 Support occupations in personal services	2	0.0%
4410	4410 Home care provider occupations	2	0.0%
5410	5410 Program leaders and instructors in recreation, sport and fitness	1	0.0%
8311	8311 Logging machinery operators	1	0.0%
5112	5112 Creative and performing artists	1	0.0%
Total		24,936	100%
Note: Data is based on 2023 employment forecast.			
Note: 2021 NOC			

Appendix C: Education Resources by Occupation

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7330	Transport truck and transit drivers	Truck drivers operate gasoline- and diesel-powered trucks, tractor-trailers, and similar vehicles to transport goods and materials over local routes or long distances.	They need good judgement, mental awareness. They inspect brakes, tires, load trucks to maximize the use of space, conduct security checks and inspections along the way, make emergency roadside adjustments and repairs, follow local and inter-provincial highway safety regulations, ensure vehicle and axle weights meet regulatory requirements	No	
7210	Machining, metal forming, shaping and erecting trades	Machinists set up and operate precision metal cutting and grinding machines such as lathes, milling machines, drills and grinders to make and repair products made from metals, non-ferrous materials (materials that do not contain iron) and new alloys.	They need mechanical aptitude, critical thinking and problem-solving skills. The ability to work alone at tasks that require concentration as well as physical effort. They should enjoy doing creative work with machinery that requires a high degree of skill and precision. Machinists work according to very precise specifications, determine dimensions by logic or by measuring samples using instruments such as micrometers and vernier calipers.	Yes	Northern Alberta Institute of Technology

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7511	Trades helpers and labourers	Construction craft workers prepare and clean up construction sites. They move materials and equipment and do demolition, excavating and compacting activities.	They should be comfortable working outdoors and using hand and power tools. They need strength and stamina, manual dexterity, a safety-conscious attitude, the ability to work as a team. They remove rubble and other debris from work areas, excavate, backfill, compact and level subgrade, shovel concrete and other materials into concrete mixers, install municipal sewer and water mains, drill and blast rock, demolish buildings	No	

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7001	Managers in construction and facility operation and maintenance	Residential construction site managers (RCSM) plan, organize, direct, control and evaluate the construction of wood frame non-commercial buildings and residences up to four stories in height.	They work according to schedules, specifications and budgets, coordinate the work of skilled tradespersons and suppliers and play a significant role in planning, quality control, jobsite safety and ensuring building codes are followed. They coordinate, track, report and monitor the activities and progress of construction projects, ensure safety protocols, with the home, plan and implement home construction quality controls. They should enjoy being physically active, working outdoors and working in an occupation that provides a visible sense of accomplishment.	Yes	1.Northern Alberta Institute of Technology 2.University of Alberta

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7220	Technical electrical trades and electrical power line and telecommunications workers	Electricians install, alter, repair and maintain electrical systems that are designed to provide heat, light, power, control, signals or fire alarms for all types of buildings, structures and premises.	Electricians read and interpret electrical, mechanical and architectural drawings, specifications and codes to determine wiring layouts. They cut, thread, bend, assemble and install conduits, pull wire through conduits and holes in walls and floors, position, maintain and install distribution and control equipment. Electricians need communication skills including reading skills, an aptitude for math, mechanical ability, physical strength and stamina.	Yes	Northern Alberta Institute of Technology
9510	Labourers in processing, manufacturing and utilities	Municipal recycling waste handlers sort recyclable waste materials. These can include glass, plastic, metal, and paper.	They need ability to work quickly, remain alert, have good communication skills. They confirm that materials are of specified types and grades, and free of contaminants, load materials on conveyor belts, operate hydraulic lift jacks.	No	

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7230	Plumbers, pipefitters and gas fitters	Steamfitter-pipefitters lay out, assemble, fabricate, maintain and repair piping systems which carry water, steam, chemicals or fuel used in heating, cooling, lubricating and other processes.	They should enjoy doing careful and exacting work, with little direction or supervision. They need strength and stamina, manual dexterity, mechanical aptitude, ability to read and understand complex instructions. They install a typical piping system in a commercial building or industrial plant, steamfitter-pipefitters first study blueprints, drawings and specifications to determine the type of pipe and tools to use, and lay out the sequence of tasks.	Yes	Alberta Pipe Trades College

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7240	Machinery and transportation equipment mechanics (except motor vehicles)	Heavy equipment technicians maintain, repair and overhaul heavy vehicles and industrial heavy equipment, and commercial transport devices connected to or moved by a power unit.	They should enjoy doing precision work, solving problems, and working with their hands. They need good vision, hearing and sense of smell to diagnose problems, strength and stamina for working with heavy equipment and in cramped or awkward positions, mechanical ability. They interpret work orders and technical manuals, keep equipment cleaned, lubricated and maintained, diagnose faults or malfunctions, adjust equipment and repair or replace defective parts, components or systems.	Yes	Northern Alberta Institute of Technology

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7231	Carpenters and cabinetmakers	<p>Carpenters construct, erect and repair buildings and other structures made of wood, wood substitutes, steel and other materials</p> <p>Cabinetmakers build and repair custom or production-type fixtures and furniture made of wood or wood substitutes.</p>	<p>They crib the basement, build the house framework, walls, roof, exterior and interior finishes, install doors, windows, flooring, do finishing work such as cabinets, stairs, handrails, panelling, moulding and ceiling tiles. They need manual dexterity, balance for working on scaffolding, math skills to quickly and accurately solve problems.</p> <p>Cabinetmakers create and read specifications and drawings, make layouts and patterns, set up and operate woodworking equipment, cut, shape, mould and assemble components made of wood or wood substitutes. They need good eyesight to select woods and look for surface imperfections, hand-eye co-ordination and manual dexterity, strength and stamina to lift heavy items.</p>	Yes	1.Northern Alberta Institute of Technology

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7201	Contractors and supervisors, technical industrial, electrical and construction trades and related workers	Electrical contractors erect, install, repair, service and maintain electrical installations and equipment.	They negotiate project requirements with customers, estimate material, equipment, labour, and other costs, prepare bids for the electrical work involved in construction projects, negotiate contract terms with clients. They need exceptional organizational skills, oral and written communication skills, creative problem-solving skills, leadership skills. They should also enjoy solving problems and co-ordinating / scheduling activities. They should be comfortable directing and supervising the work of others.	Yes	Northern Alberta Institute of Technology
7510	Longshore workers and material handlers	Material handlers handle, move, load and unload materials by hand or using a variety of material handling equipment. They are employed by transportation, storage and moving companies, and by a variety of manufacturing and processing companies and retail and wholesale warehouses.	·Load, unload and move products and materials by hand or using basic material handling equipment. Perform other material handling activities such as counting, weighing, sorting, packing and unpacking.	No	·

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7340	Operators, drillers and blasters	Heavy equipment operators use a variety of mobile machines and attachments. These machines excavate, grade, and landscape earth. They also move materials and equipment.	Heavy equipment operators control heavy equipment. They do this by moving levers or foot pedals. They must perform safety checks to be sure the equipment is in safe and efficient working order. This includes performing minor maintenance and changing attachments as needed. They need to be physically fit, have good vision and spatial awareness, manual dexterity, including eye, hand, and foot coordination, fast reflexes, mechanical ability, to work well in a team or on their own, communication skills and troubleshooting problems	Yes	Interior Heavy Equipment Operator School Ltd

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
9001	Managers in manufacturing and utilities	Operations managers direct and coordinate the operation of manufacturing, service delivery, and production departments in industrial, commercial, and government organizations.	They analyze, design, and improve the processes by which goods and services are produced, implement and manage quality assurance and safety programs, forecast future demand for goods and services, develop short-, intermediate- and long-term production and service plans, recommend locations for facilities, such as plants, warehouses, and service units. They need leadership skills, decision-making skills, communication skills, analytical skills, the ability to motivate, lead, and manage employees, adaptability. They should enjoy directing the work of others, negotiating with other managers to find innovative solutions to problems.	Yes	1. Grant MacEwan University 2. University of Alberta

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
1440	Supply chain logistics, tracking and scheduling coordination occupations	Parts technicians perform ordering, warehousing, inventory control and sales of parts.	<p>Parts technicians manage and dispense parts inventories, and may be responsible for stock handling, identifying and cataloguing parts and assemblies, ordering, receiving, inspecting, sorting, or pricing and selling parts. They may work with parts from the original manufacturer or other manufacturers of automotive, heavy duty, farm implement, industrial, recreational vehicle, plumbing, electrical or other types of equipment.</p> <p>In general, they sell supplies and parts, order parts and keep inventories, receive supplies and store them according to a pre-arranged system, organize and ship exchange parts and returns. In general, materials technicians prepare, generate, pick, and ship orders. receive shipments and ensure they are complete and in good order, process customer product returns and the return of products to suppliers, schedule and arrange the transport of materials</p>	Yes	<p>1. Grant MacEwan University</p> <p>2. University of Alberta</p> <p>3. Northern Alberta Institute of Technology</p>

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7520	Taxi, personal service and delivery service drivers	Taxi drivers operate automobiles and vans to transport paying passengers.	In general, they pick up or meet passengers in response to a dispatched call or a pre-arranged booking, help passengers board or leave the taxi, provide directions and information about the area, town, or city, report to a central dispatcher by radio or computer monitor, drive vehicles safely and efficiently to desired destinations, ensure that vehicles meet mechanical safety standards. They need Interpersonal skills, physical coordination and spatial awareness to safely operate a vehicle	No	

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
1310	Administrative, property and payroll officers	<p>Property or condominium managers oversee and coordinate the administration, accounting, maintenance, operation, and improvement of residential, commercial, industrial, and condominium properties.</p> <p>Payroll administrators process payroll information. They determine pay and benefit entitlements and source deductions for employees in organizations of all types and sizes.</p>	<p>Property managers work on behalf of owners to manage their rental properties. They communicate regularly with owners and tenants on issues affecting the property. They strive to maintain good owner-tenant relationships. They collect rents, serve notices to vacate, maintain inventory of rentable space, review and ensure rents are at market value and make appropriate recommendations to the owner. They need diplomacy, patience, flexibility, oral and written communication skills. Payroll administrators need the ability to deal with details carefully and accurately, commitment to trustworthiness. organizational skills, problem-solving and decision-making skills</p>	Yes	<p>1. East-West College - Edmonton</p> <p>2. Roberts on College - Edmonton</p> <p>3. Sundance College - Edmonton</p> <p>4. Reeves College - Edmonton</p>

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
2230	Technical occupations in civil, mechanical and industrial engineering	Mechanical engineering technologists may work alone or with mechanical engineers. They help design, draw, develop, modify, and optimize products, machines, mechanical systems, and manufacturing processes.	Prepare specifications and drawings, inspect construction, prepare layouts for new machines, tool designs, plants, and equipment, conduct performance tests on components, products, or equipment, study test results. They need the ability to see objects in 3D by looking at 2D drawings, sketching or drawing skills, math skills and aptitude, the ability to solve problems, writing and speaking skills, They should enjoy doing precise work, obtaining and analyzing test results, finding creative solutions to problems, taking a methodical approach to their work	Yes	Northern Alberta Institute of Technology

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7320	Building maintenance installers, servicers and repairers	Building superintendents maintain and manage commercial, institutional and residential properties.	Building superintendents are representatives of property managers or owners. They ensure a high standard of building cleanliness, inside and out, make sure that heating, ventilation, power and other mechanical equipment operates effectively, supervise workers and contractors in the care, cleaning and maintenance of buildings and do minor repairs themselves, co-ordinate renovation projects, act as a liaison between owners or managers and tenants, respond to requests and complaints, keep records. They must possess a record clear of criminal activity, the ability to be bonded, good communication and interpersonal skills. They should enjoy having clear rules and guidelines, operating equipment and solving problems by experimenting.	No	

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
7202	Contractors and supervisors, technical maintenance trades and heavy equipment and transport operators	Industrial construction crew supervisors co-ordinate and oversee the work of construction crews during the construction, shut down, maintenance and upgrading of industrial facilities such as petrochemical processing plants, pulp and paper plants, power generating plants, pipelines, refineries and oil sands plants.	Lead the crew and act as the employer's representative on the job, follow project plans and schedules, plan and co-ordinate activities with other crews on the job site, supervise the crew's daily and weekly activities, ensure a safe workplace and that crew members observe safety procedures, ensure the crew's work meets industry standards for quality and crew productivity, prepare reports and documentation as required by the employer. They should enjoy directing and co-ordinating workers' activities.	No	

NOC Code	Occupation Title	Description	Required Skills	Requires Post-Secondary (Yes/No)	Schools
9310	Central control and process operators in processing and manufacturing	Refinery and upgrader process operators are responsible for the day-to-day operations of oil refineries and upgraders.	They conduct ongoing routine checks of equipment and processes, prepare equipment and ensure it is safe for maintenance work, respond to problems and emergency situations as they arise, record readings manually or on a computer, make adjustments on equipment and note possible problems, take samples of oil, gas, or water, conduct basic chemical tests, ensure safe operations, perform general housekeeping duties, such as wiping up oil spills and sweeping floors, monitor process indicators, ensure safety and environmental regulations are followed. They should like analyzing information to solve problems. They should be at ease working with others in a team.	Yes	Northern Alberta Institute of Technology

Note: Data is from ALIS