

**2014–2023**
Key Highlights

Construction and Maintenance Looking Forward

Alberta

Alberta continues to lead Canada’s construction industry; adding jobs and building the productive capacity of the provincial economy to new heights. Alberta’s extraordinary economic growth is tied to the development of the oil sands and dates back at least 15 years. There was a pause in 2009, but the pace of expansion resumed and, by 2013, construction employment – across all markets – had grown past the 2008 peak level. Employment more than doubled from 1997 to 2012.

During 2013, global market uncertainties seemed to signal a slowdown or pause in the pace of construction, but late in the year, the cost of repairs from the Calgary floods combined with new project announcements to drive another round of hiring for 2014.

Construction employment growth continues in virtually every year of the new 2014–2023 forecast scenario, but year-to-year growth rates are lower than the past decade. These rates can be deceiving, however, as the much larger size of the workforce means that the number of jobs added each year often approaches the change in the boom years of the last decade. Certainly, human resources challenges related to skills, training, mobility and competition will continue on nearly the same scale.

There are almost no cyclical downturns to interrupt the annual additions to Alberta’s workforce. Later in the scenario period, housing starts will decline as interest rates rise and government fiscal restraint in some areas lowers government spending. Otherwise, in each year of the scenario, construction spending rises in most markets.

At least two countervailing forces – demographics and competition for workers from major construction projects in other provinces – may create recruiting challenges. Although

Alberta’s construction stakeholders have adapted to these conditions before, as the workforce ages each year, the number of retirements will rise and demographics limit the number of young people available to join the industry. Additionally, a series of major resource, infrastructure and engineering projects in other provinces will compete for the key trades needed in Alberta.

Strong growth has made Alberta a leader in the technology, human resources management and training needed to respond to these challenges. This includes modular construction systems. Evidence presented in *Construction and Maintenance Looking Forward 2014* suggests that the solutions that worked in 2007 and 2008 will need to be expanded and adapted from 2014 to 2023. New evidence documents the reliance on “non-resident employment” on construction jobs across Canada. Alberta pioneered the practice of bringing in workers from outside of the province (both out-of-province and temporary foreign workers) to work on big and often remote projects¹. The size of this non-resident workforce is rising as a proportion of the total construction workforce. Later in the scenario period, as workers return home when projects wind down, they may leave large gaps in Alberta’s labour force. At the same time the industry will need a growing resident workforce to fill gaps related to retirements. A detailed look at these

¹ See “Inter-provincial Employees in Canada” by Christine Laporte and Yuqian Lu, *Analytical Studies Branch, Social Analysis Division, Statistics Canada, 2013, 11-626, No. 29.*



forces and impacts in *Construction and Maintenance Looking Forward 2014* offers context for a review of human resources priorities and planning.

BuildForce Canada uses a scenario-based forecasting system to assess future labour market conditions. This labour market information (LMI) system tracks conditions for 33 trades and occupations². BuildForce consults with industry, including owners, contractors and labour groups, to validate the scenario assumptions and construction project lists, and seeks input from government on related analysis. This approach provides current information and first-hand assessments of labour markets for individual trades and occupations.

RESIDENTIAL LABOUR REQUIREMENTS

At its peak in 2007, housing starts in Alberta were running well above levels needed to meet household formation³. Driven initially by the economic downturn, the gap closed from 2008 to 2011, but starts were strong again in 2012 and 2013 as overall economic conditions improved. Activity will plateau in 2014 and then move down and up in a mild cycle to 2023.

Overall spending and employment will rise past this earlier peak as repairs and renovation rise – both in response to the flooding and to the much larger housing stock. At the end of the scenario in 2023, residential employment will be more than 6,600 higher than in 2013.

The high peaks and low troughs in the housing cycle have altered the pool of skilled workers – especially as non-resident workers arrived and departed in response to the cycles of the last decade. New technologies and associated trade specializations are adding a new dimension to the demands of human resources management in new home construction.

Training systems will need to expand and the housing industry will have to invest in promotion and retention programs to meet changing needs.

While the 6,600 jobs added to the residential workforce from 2014 to 2023 are less than the gains in non-residential (almost 26,000 jobs), the challenges will be significant. This includes the rising number of retirements among experienced and skilled home builders and competition from other construction markets.

NON-RESIDENTIAL LABOUR REQUIREMENTS

Led by major resource and engineering projects, non-residential construction employment in Alberta rises in each year of the 2014–2023 scenario. The strongest gains, which are driven by the start-up of new major oil sands projects, occur in 2014. Later in the scenario period, the timing of major industrial and other projects shifts employment across markets. Commercial and institutional work is the more stable source of annual growth. Across the scenario, increasing maintenance and sustaining capital work adds to employment demands.

The rapid pace of resource development in Alberta has skewed the mix of construction jobs toward engineering, infrastructure and industrial work – 70 percent of the Alberta construction labour force works in the non-residential sector and 70 percent of this group works in engineering and heavy construction. Equivalent proportions in other provinces are much lower, with engineering work usually accounting for one third of non-residential construction.

Alberta leads the demand for skilled and specialized labour in major projects across Canada. The BuildForce LMI system tracks these changing labour requirements with a major project list and analysis of production growth and capacity additions in the oil sands sector.⁴

The current BuildForce project list tracks more than 70 major projects outside the oil sands. The timing and mix of this work is critical to the overall scenario and has been altered to reflect priorities that emerged in 2013. For example, the 2014 scenario includes the Energy East Pipeline and other key infrastructure work.

This long list of major projects sustains a very large workforce of about 50,000 to 70,000 and the pace of growth is set by start and completion dates. In the current plans there are a large number of major projects that are scheduled to end in 2013 and 2014. As these projects wind down, a series of new projects begins with their own requirements. Hiring related to the flood damage repairs and recently announced oil sands major projects boost labour requirements in 2014.

Schedules anticipate a brief pause in 2015 as many known industrial projects wind down, and then from 2016 to 2023, moderate growth in new work across all engineering and resource markets drives requirements steadily higher. Most of the currently scheduled projects add jobs from 2015 to 2019.

² This group includes on-site workers – 75 percent of the full construction workforce. Statistical reliability is limited by small populations in some provinces, but all of the 33 trades and occupations are included in the Alberta analysis.

³ Household formation refers to the change in the number of households (persons living under one roof or occupying a separate housing unit) from one year to the next. It is the means by which population growth is transformed into demand for new housing.

⁴ A separate oil sands Construction and Maintenance Looking Forward publication reports on labour requirements and market assessments that provide more detail on the timing and the trades and occupations involved in this sector.

These engineering-related projects add work for a selected group of trades and occupations:

- boilermakers
- carpenters (scaffolding)
- construction estimators
- contractors and supervisors
- crane operators
- gasfitters
- industrial instrument mechanics
- insulators
- ironworkers
- sheet metal workers
- steamfitters and pipefitters
- welders

This group has the highest overall growth in labour requirements and represents more than 55 percent (12,000 jobs) of total job creation in the major non-residential projects started from 2014 to 2019.

THE AVAILABLE WORKFORCE

The combined effects of more than a decade of rising labour requirements and the demographics of an aging population remove unemployment – the traditional starting point for recruiting – as a supply-side option in most cases. When the construction boom began as far back as 1995, unemployment in construction was three times current rates. At the cyclical peaks in 2007 and 2012, construction unemployment had been reduced to record low levels.

Under these conditions there is a very limited pool of unemployed for recruiting and attention shifts to other markets, with mobility as the critical factor.

The BuildForce LMI system tracks the net in-mobility⁵ that is needed to meet these requirements. New evidence provides estimates that divide this mobile workforce into two components: non-resident and permanent. The non-resident group has emerged over the past 10 years as an important workforce that includes both interprovincial employment and temporary foreign workers. Research at Statistics Canada estimates a large and growing workforce that reports a residence in one province and work in another.⁶ This interprovincial employment includes both the long-recognized construction workforce in Alberta, as well as the new workforce filling jobs on the major projects in many other provinces on a fly-in, fly-out basis. This group is supplemented by the temporary foreign workers that have been recruited on a similar basis.

Long-term demographic trends are another key driver in these supply-side dynamics. The BuildForce LMI system breaks down the annual change in the resident labour force into retirements, new entrants and net in-mobility. Retirements measure permanent losses to the workforce and this replacement demand is partially offset by the entry of the younger population, aged 30 and younger, into their first jobs in construction.

The rising labour force across the 2014–2023 scenario includes the addition of more than 38,000 new workers. Labour requirements to replace retiring workers add another 37,500 and there are just over 30,000 young Albertans who might be expected to join the workforce. This leaves a total requirement for 45,000 new workers to be recruited from outside the Alberta construction industry. This in-mobility is spread unevenly across the scenario, with half of the arrivals needed early in the period.

Workforce requirements on this scale far exceed other provinces and make Alberta a magnet for interprovincial mobility. These changes leave the construction industry with a complex human resources planning challenge. In the past, a large contingent of the added workforce has been recruited from outside of the province – often on a non-resident basis. It will be important to attract or retain a net permanent addition in the province – especially later in the scenario period when retirements are rising.

Training and retaining all the workers needed locally is a priority. Some of this new workforce will come from the current population of non-resident workers. At the same time, the industry must recruit new construction workers from Alberta's local population to fill the larger recruiting complement for retirements. All this must be managed in the broader context of competing demands for construction workers in other provinces.

The long-term resource potential of Alberta and the associated growth in labour requirements and costs have been factors in the development of modular construction and prefabrication facilities. BuildForce is adapting the labour market assessments to reflect the impact of these systems on rising construction productivity and labour requirements, both in construction and in other industries.

RANKINGS, RISKS AND OPPORTUNITIES FOR MOBILITY

The rankings set out in the following table track periods of both market tightness and weakness. Each labour market is assigned an annual rank from 1 (very weak conditions where workers will seek jobs in other markets) to 5 (where

⁵ *In-mobility refers to the arrival of workers from outside the local construction industry.*

⁶ See "Inter-provincial Employees in Canada" by Christine Laporte and Yuqian Lu, *Analytical Studies Branch, Social Analysis Division, Statistics Canada, 2013, 11-626, No. 29.*



labour shortages will force recruiting from distant markets). Rankings are calculated as a summary that combines measures of employment growth, unemployment and net in-mobility set out above. Industry stakeholders on the Alberta LMI Committee have contributed their experience and expectations to the rankings where the system might not fully capture market realities.

A clear pattern emerges, with stronger demands in 2014 and 2015, and easing in 2016 and 2017. A more modest peak in 2018 and 2019 reflects the start-up of new oil sands projects. Note that the extended periods where markets are ranked as a 3 are consistent with brief episodes that include project start-ups and shutdowns for maintenance, where the local workforce will not meet demands. BuildForce is adding new measures to assess the impact of major maintenance and sustaining capital shutdowns that are important features of the new resource operations. Rankings reflect a combination of residential and non-residential market conditions unique to Alberta.

Where rankings differ across provinces or industries they signal the potential for mobility. A description of projects and markets in other industries and provinces is needed to complete the scenario and anticipate recruiting and job search conditions. Findings in other provincial *Construction and Maintenance Looking Forward* reports reveal a long list of resource and other projects that require a similar mix of trades and occupations as those required in Alberta.

For the construction industry in Alberta, there are competing demands for key construction trades in other provinces. In 2014 and 2015 these are centred in Saskatchewan and Newfoundland and Labrador. In 2015 and 2016 demands in British Columbia are also rising. There are a few examples of declining requirements in other provinces, usually associated with projects ending, that might meet Alberta needs, including the winding down of current projects in Newfoundland and Labrador and Saskatchewan in 2016 and later in the scenario period.

The *Construction and Maintenance Looking Forward* national report expands on the range of mobility options and industry implications.

In the 2014 *Construction and Maintenance Looking Forward* analysis, Alberta appears again as the pivotal point in Canadian construction labour market dynamics for a key group of industrial and engineering trades and occupations. This workforce has skills and experience that are essential to new construction, maintenance and utilities activity. Alberta’s capacity to manage the cyclical shifts and long-term requirements for training, certification, immigration, mobility and promotion has important implications for economic development across Canada.

MARKET RANKINGS

1	Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other current working conditions. Excess supply is apparent and there is a risk of losing workers to other markets.
2	Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other working conditions.
3	The availability of workers meeting employer qualifications in the local market may be limited by large projects, plant shutdowns or other short-term increases in demand. Employers may need to compete to attract needed workers. Established patterns of recruiting and mobility are sufficient to meet job requirements.
4	Workers meeting employer qualifications are generally not available in local markets to meet any increase. Employers will need to compete to attract additional workers. Recruiting and mobility may extend beyond traditional sources and practices.
5	Needed workers meeting employer qualifications are not available in local markets to meet current demand so that projects or production may be delayed or deferred. There is excess demand, competition is intense and recruiting reaches to remote markets.

RANKINGS FOR TRADES AND OCCUPATIONS IN ALBERTA

TRADES AND OCCUPATIONS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Boilermakers	3	4	4	4	4	4	4	4	3	3	3

Employment is exclusively in non-residential construction. Demand requirements related to oil sands developments, sustaining capital and maintenance work rise across the scenario period, tightening labour market conditions from 2014 to 2020. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market will be required in each year of the scenario to meet increasing demand requirements.

Bricklayers	3	4	4	3	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to industrial and non-residential building construction rise steadily across the scenario period. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Labour market conditions are generally balanced, following peak demands in 2014 and 2015. A potential for mobility between sectors may help to meet market requirements; however, skills portability may be limited to meet the demand requirements for refractory workers on major industrial and engineering projects. The age profile for this trade is older than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required in each year of the scenario to meet requirements.

Carpenters	4	4	4	4	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to non-residential building construction continue to rise across the scenario period, with the strongest growth and tighter labour markets between 2013 and 2016. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter market conditions in 2014. There are limited opportunities for potential mobility between sectors. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early in the scenario period. Consecutive years of high rankings for this trade signal a potential role for non-resident workers from out of the province to help meet local construction requirements.

Concrete finishers	3	4	3	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to engineering projects rise steadily across the scenario period. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Labour market conditions are generally balanced. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to maintain balanced market conditions.

Construction estimators	4	4	4	4	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to engineering projects continue to rise across the scenario period, tightening labour market conditions from 2013 to 2016. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. A potential for mobility between sectors may help to meet market requirements, but mobility may be limited by the portability of skills to meet the growing demands for major industrial and engineering projects. The age profile for this occupation is older than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early in the scenario period.

Construction managers	4	4	4	4	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to engineering projects continue to rise across the scenario period, tightening labour market conditions from 2013 to 2016. Residential activity follows a mild cycle, up and then down over the near term, with more steady growth starting in 2020. A potential for mobility between sectors may help to meet market requirements, but mobility may be limited by the portability of skills to meet the growing demands for major industrial and engineering projects. The age profile for this occupation is older than average. New entrants into the labour force do not meet replacement demand requirements. Consecutive years of high rankings for this trade signal a potential role for non-resident workers from out of the province to help meet local construction requirements.

Construction millwrights and industrial mechanics	3	3	3	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to major industrial and engineering projects rise steadily from current levels, but labour market conditions remain generally balanced across the scenario period. The age profile for this group is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to maintain balanced market conditions.

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TRADES AND OCCUPATIONS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Contractors and supervisors	3	4	4	4	3	3	4	3	3	3	3

Employment is concentrated in non-residential construction. Demand requirements related to engineering projects continue to rise across the scenario period, tightening labour market conditions from 2014 to 2016 and again in 2019. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter market conditions in 2014. A potential for mobility between the residential and non-residential sectors may help to meet market requirements, but mobility may be limited by the portability of skills to meet the growing demands for major industrial and engineering projects. The age profile for this group is older than average. Replacement demand requirements are not met by new entrants into the labour force. Consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province to help meet local construction requirements.

Crane operators	3	4	4	4	3	3	4	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to engineering projects continue to rise across the scenario period, tightening labour market conditions from 2014 to 2016 and again in 2019. High-rise requirements are relatively unchanged across the scenario period. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements. Consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province to help meet local construction requirements at various times across the scenario period.

Drillers and blasters	4	4	3	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to engineering projects continue to rise across the scenario period, but labour markets are generally balanced across the scenario period. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early in the scenario period.

Electricians (including industrial and power system)	3	4	4	4	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to industrial and non-residential building construction rise steadily across the scenario period. High-rise residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Following peak demands between 2014 and 2016, labour market conditions are generally balanced. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this trade signal a potential role for non-resident workers from out of the province to help meet peak demand requirements early in the scenario period.

Elevator constructors and mechanics	3	3	3	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to major industrial, engineering and maintenance work rise steadily from current levels, but labour market conditions remain generally balanced. Residential requirements are relatively unchanged across the scenario period. The age profile for this group is older than average. Replacement demand requirements are not expected to be met by new entrants into the labour force. Workers from outside the local market may be required in each year of the scenario to meet requirements.

Floor covering installers	3	4	3	3	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to non-residential building construction rise steadily across the scenario period. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter labour market conditions in 2014. Market conditions are generally balanced. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to maintain balanced conditions.

Gasfitters	4	4	4	3	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to non-residential building construction continue to rise across the scenario period, with the strongest growth and tighter labour markets between 2013 and 2015. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. A potential for mobility between sectors may help to meet market requirements. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early in the scenario period.

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TRADES AND OCCUPATIONS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Glaziers	3	4	3	3	3	3	3	3	3	4	4
Employment is concentrated in non-residential construction. Demand requirements related to non-residential building construction continue to rise across the scenario period. Labour market conditions are generally balanced across most of the period. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required at various times across the scenario to meet increased demand requirements.											
Heavy equipment operators (except crane)	3	4	3	3	3	3	3	3	3	3	4
Employment is concentrated in non-residential construction. Labour requirements related to civil and other engineering work weaken in 2015 and then rise more steadily across the remainder of the scenario period, with mostly balanced labour market conditions. The mobility of workers from weakening markets may be limited by the portability of skills to meet the growing demands for major industrial and engineering projects. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands at various times across the scenario period.											
Heavy-duty equipment mechanics	3	4	3	4	4	4	4	3	3	3	4
Employment is concentrated in non-residential construction. Demand requirements related to oil sands developments, sustaining capital and maintenance work rise across the scenario period, tightening labour market conditions across the majority of the scenario period. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this trade signal a potential role for non-resident workers from out of the province to help meet local construction requirements.											
Industrial instrument technicians and mechanics	3	3	3	4	3	3	3	3	3	3	3
Employment is exclusively in non-residential construction. Demand requirements related to industrial and engineering projects rise steadily across the scenario period. Labour market conditions reach peak demands in 2016, but are generally balanced. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to maintain balanced market conditions.											
Insulators	3	4	4	4	4	3	4	4	3	3	3
Employment is concentrated in non-residential construction. Demand requirements related to non-residential building construction and engineering projects rise sharply from current levels through 2020, with tight labour market conditions across most of the scenario period. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this trade signal a potential role for non-resident workers from out of the province to help meet local construction requirements.											
Ironworkers and structural metal fabricators and fitters	3	4	4	4	4	4	4	3	3	3	3
Employment is concentrated in non-residential construction. Demand requirements related to major engineering projects rise sharply from current levels through 2020, tightening labour market conditions from 2014 to 2019. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province to help meet local construction requirements.											
Painters and decorators	3	4	3	3	3	3	3	3	3	3	3
Employment is divided between the residential and non-residential sectors. Demand requirements related to residential activity rise steadily across the scenario period, but labour market conditions are generally balanced. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter market conditions in 2014. There are limited opportunities for potential mobility between sectors. The age profile for this group is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to maintain balanced market conditions.											

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TRADES AND OCCUPATIONS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Plasterers, drywall installers and finishers, and lathers	4	4	4	3	3	3	3	3	4	4	4

Employment is divided between the residential and non-residential sectors. Demand requirements related to residential activity rise over the near term, with tight labour markets continuing in 2014 and 2015 and occurring again as activity increases between 2021 and 2023. Non-residential building construction rises at a more moderate rate across the scenario period. There are limited opportunities for potential mobility between sectors. The age profile for this group is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early and then again later in the scenario period.

Plumbers	3	4	3	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Residential activity cycles up and then down over the near term, with tight labour market conditions in 2014 and then more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter conditions in 2014. Non-residential building construction rises at a more moderate rate across the scenario period. Overall, labour market conditions are mostly balanced across the scenario period. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario to meet requirements.

Refrigeration and air conditioning mechanics	4	4	4	3	3	3	3	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to new non-residential building construction and maintenance work continue to rise at a moderate pace across the scenario period, with labour market conditions tightening in 2014 and 2015. Residential activity cycles up and then down over the near term, with tight market conditions in 2014 and then more steady growth starting in 2020. The age profile for this group is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required across the scenario period to meet requirements.

Residential and commercial installers and servicers	3	4	3	3	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Residential activity cycles up and then down over the near term, with tight labour market conditions in 2014 and then more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter market conditions in 2014. Commercial construction rises at a more moderate rate across the scenario period. Overall, labour market conditions are mostly balanced across the period. There are limited opportunities for potential mobility between sectors. The age profile for this group is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required in each year of the scenario to meet requirements.

Residential home builders and renovators	4	4	4	3	3	3	3	3	4	4	4
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Employment is exclusively in residential construction. Residential activity cycles up and then down over the near term, with tight labour market conditions in 2014 and then more steady growth starting in 2020. Major flood damage in Calgary contributes to tighter market conditions in 2014. Conditions return to balance by 2016 as new residential construction slows and then grows later in the scenario period. The age profile for this group is older than average. New entrants into the labour force do not meet replacement demand requirements. Consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province to help meet local construction requirements.

Roofers and shinglers	4	4	4	3	3	3	3	3	4	4	4
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Employment is divided between the residential and non-residential sectors. Demand requirements related to residential activity rise over the near term, with tight labour markets continuing in 2014 and 2015 and then occurring again as activity increases between 2021 and 2023. Non-residential building construction rises at a more moderate rate across the scenario period. A potential for mobility between sectors may help to meet market requirements. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required in each year of the scenario to meet requirements.

Sheet metal workers	3	4	4	4	4	3	4	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to non-residential building construction and engineering projects rise from current levels through 2020, with tight labour market conditions from 2014 to 2017 and again in 2019. Residential activity cycles up and then down over the near term, with more steady growth starting in 2020. The age profile for this trade is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands midway through the scenario period.

continued on next page

TRADES AND OCCUPATIONS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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Steamfitters, pipefitters and sprinkler system installers	3	4	5	5	4	4	4	4	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to oil sands developments, sustaining capital and maintenance work rise across the scenario period, tightening labour market conditions from 2014 to 2020. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province to help meet local construction requirements.

Tilesetters	4	4	3	3	3	3	3	3	3	3	3
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Employment is divided between residential and non-residential building construction. Demand requirements related to residential and commercial activity continue to rise across the scenario period, with tighter labour markets continuing in 2014 and then mostly balanced conditions across the remainder of the scenario period. There are limited opportunities for potential mobility between sectors. The age profile for this trade is about average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to maintain balanced market conditions across the scenario period.

Trades helpers and labourers	4	4	3	3	3	3	3	3	3	3	3
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Employment is divided between the residential and non-residential sectors. Demand requirements related to both sectors continue to rise across the scenario period, with tighter labour markets continuing in 2014 and then mostly balanced conditions across the remainder of the period. Major flood damage in Calgary contributes to tighter market conditions in 2014. A potential for mobility between sectors may help to meet market requirements; however, skills portability may be limited to meet the demand requirements on major industrial and engineering projects. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands early in the scenario period.

Truck drivers	3	4	3	4	3	3	4	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to the start, peak and wind-down of civil and major engineering projects translate into periodic tight labour market conditions across the scenario period. The age profile for this trade is older than average and contributes to tighter market conditions. New entrants into the labour force are expected to meet replacement demand requirements, but workers from outside the local market may be required to meet peak demands at various times across the scenario period.

Welders and related machine operators	3	4	4	4	4	4	4	3	3	3	3
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Employment is concentrated in non-residential construction. Demand requirements related to oil sands developments, sustaining capital and maintenance work rise across the scenario period, tightening labour market conditions from 2014 to 2019. The age profile for this group is younger than average. New entrants into the labour force are expected to meet replacement demand requirements, but consecutive years of high rankings for this group signal a potential role for non-resident workers from out of the province with specialized skills to help meet local construction requirements.

Note: Replacement demand refers to the loss of workers due to retirement and mortality.

Source: BuildForce Canada



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