



BRITISH COLUMBIA

Stacked major project demands; market challenges loom

HIGHLIGHTS 2018–2027

British Columbia is facing very tight construction labour markets over the coming decade. Unprecedented short-term non-residential construction demand along with sustained levels of residential construction in the lower mainland will place significant strain on the province's existing workforce. To meet these demands, the non-residential sector alone will need to add 17,000 new workers between 2019 and 2021.

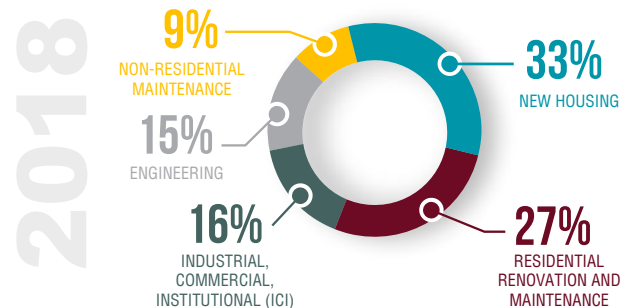
Over the 2018–2027 scenario period, pressures on the province's workforce will moderate slightly as many of the non-residential projects approach completion. Of the 178,000 workers currently employed in the 34 direct trades and occupations monitored by BuildForce Canada, however, 40,800, or approximately 22 percent of the industry's workforce is expected to retire by 2027. If the industry is successful in recruiting from the pool of 32,900 new entrant workers anticipated to be available during this period, increased demand for construction services will still leave the industry with a shortfall of 7,600 workers by 2027.

British Columbia is already grappling with recruitment challenges, which will only be exacerbated by the start of these new major projects over the next 12-18 months. In 2018, the province is coming off the largest single increase in construction employment in a decade. Growth, driven by both rising non-residential demands and a ceaseless housing-sector expansion, has whittled unemployment rates to below 5 percent.

A potential slowing in the pace of residential activity in parts of the province and a pause in the start of several new major non-residential projects may provide a temporary reprieve, but with the current number of anticipated project starts scheduled for 2019, demand for non-residential construction hiring should increase by 20 percent and then continue to rise to a peak in 2021. During this timeframe, there is a high potential for recruiting challenges for some selected trades.

The growing rate of retirements and the less than adequate supply of locally available replacement workers will mean the industry will, with increasing regularity, be required to recruit workers from outside the province's construction sector or outside the industry.

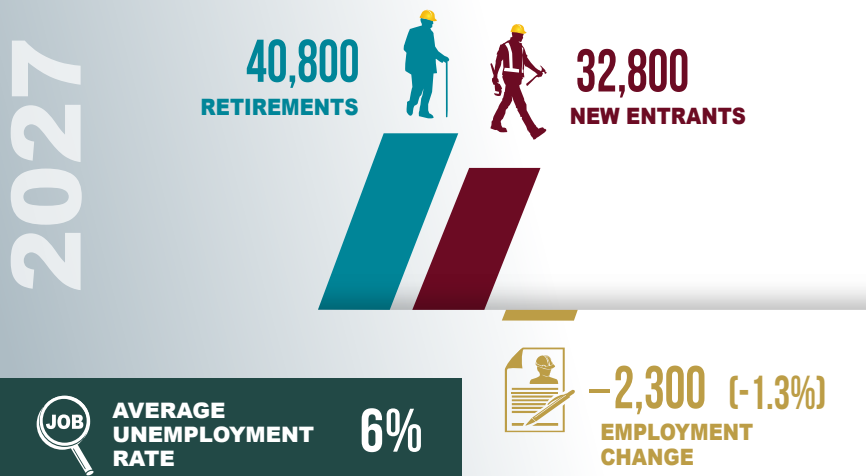
DISTRIBUTION OF CONSTRUCTION EMPLOYMENT IN 2018, BRITISH COLUMBIA



HIGHLIGHTS

- Housing starts are expected to begin moderating in 2018, following several years of aggressive expansion. Renovation demands continue to rise, but overall residential-sector employment may decline by 15 percent from the 2017 peak by 2025.
- Commercial and institutional (ICI) building construction is expected to continue growing, tracking proportionately with overall rises in population.
- The current timing of planned mining, pipeline, transportation, infrastructure and liquefied natural gas (LNG) investments should result in the largest swell in engineering construction requirements in recent history.
- Between 2019 and 2021, non-residential employment requirements are expected to rise by 20 percent, well ahead of the available local workforce, before declining again as projects near completion later in the decade.
- The anticipated starts of various major projects stack the increase in demand requirements over a three-year period to a level of activity never experienced before in the province. Consequently, workers from outside British Columbia in key trades and occupations will be required to meet peak demands.

10-YEAR WORKFORCE OUTLOOK FOR BRITISH COLUMBIA



BuildForce's LMI System

BuildForce Canada uses a scenario-based forecasting system to assess future construction labour requirements in the heavy industrial, residential, and non-residential construction markets. This labour market information (LMI) system tracks 34 trades and occupations. To further improve the robustness of the system, BuildForce consults with industry stakeholders, including owners, contractors, and labour groups, to validate the scenario assumptions and construction project lists, and seeks input from government on related analysis. The information is then distilled into labour market condition rankings to help industry employers with the management of their respective human resources.

BRITISH COLUMBIA CONSTRUCTION OUTLOOK

The pace of construction growth in British Columbia is expected to ease in 2018, followed by what is anticipated to be the largest swell in engineering construction requirements in recent history, as several major projects are scheduled to start in 2019. Meeting the expected ramp-up in construction requirements will pose a formidable challenge for the industry given that the province is already grappling with emerging recruitment challenges for skilled trades in both residential and non-residential markets driven by stronger levels of activity in the Lower Mainland.

Strengthening levels of non-residential investment, alongside incessant growth in new housing construction contributed to a record year in construction employment growth in 2017, resulting in critically low levels of unemployment. Statistics Canada data shows evidence of both record high job vacancy and low rates of unemployment in construction.

Looking forward, residential construction demands are anticipated to decline over the near term, in line with slowing population growth and lower levels of new housing activity, while industrial, commercial and institutional (ICI) building construction is expected to continue strengthening. The residential sector is expected to lose close to 11,000 workers by 2021 – close to a 10 percent decline from the high levels reported in 2017.

Over the same period, several planned major mining, public transportation, LNG and pipeline projects are scheduled to start in 2019 and 2020 and are expected to add more than 12,000 jobs, a 50 percent increase over three years to peak in 2021. While there is uncertainty around the timing of projects, the volume of other projects is significant if they proceed as scheduled. The divergence between residential and non-residential labour markets may present some recruitment opportunities between sectors, but mobility may be impeded by specific skills and experience requirements.

Aging workforce demographics are expected to add to overall recruiting challenges over the long term. BuildForce Canada estimates that the B.C. construction industry is expected to see the exit of nearly 41,000 skilled workers over the next decade due to retirements, compared to an estimated 33,000 first-time new entrants potentially drawn from the local population aged 30 and younger to replace them.

British Columbia's near-term growth outlook is strong relative to other Western provinces, but much of the available surplus workforce released from Alberta when the oil price fell in 2015 and major project activity declined, has already been absorbed in British Columbia or by other provinces. Relying on the supply of out-of-province workers may become increasingly difficult going forward. Meeting ongoing labour demands will be contingent on the industry's ability to continue attracting and training workers from outside construction or from outside the province as many of the province's major projects reach peak demand requirements.

SECTOR INSIGHTS

The following sections provide sector-specific insights into the non-residential and residential labour markets. The 2018 BuildForce LMI system provides an overview of market drivers and detailed occupational demand and supply-side analysis of labour market conditions in each sector for 34 trades and occupations tracked by BuildForce.

NON-RESIDENTIAL SECTOR

The pace of non-residential construction growth is expected to slow in 2018, following the modest gains achieved in 2017, but the start of a significant expansion is expected in 2019 as planned new major projects begin. Labour demand requirements are driven by a diverse group of gas, pipeline, utility, mining, and transportation infrastructure projects. The cumulative requirements of these major projects are expected to raise engineering construction employment to a peak in 2021 – 45 percent higher than current levels. Project starts increase employment for most trades and occupations, and these demands will likely exceed the available local workforce. As these projects approach completion between 2022 and 2025, employment will begin to fall, but is expected to remain above 2018 levels.

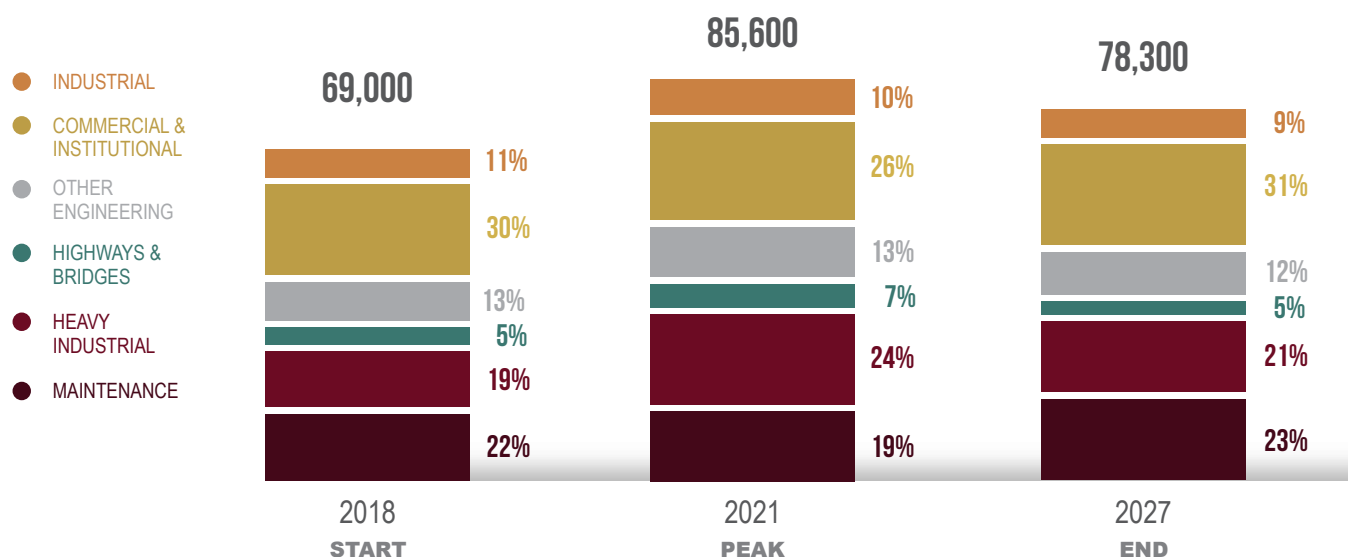
Figure 1 tracks the change in non-residential employment by sector for key reference points across the scenario period, including the start of the scenario period in 2017, the peak in 2021, and then at the end of the period in 2027.

ICI building construction demands will be driven by commercial sector growth over the near term, with institutional sector construction rising at a moderate pace over the scenario period, in line with population and demographic trends. Investment in industrial building construction is expected to remain stable over the short term, but then rise from 2019 to 2021 following the ebb and flow of major resource development projects. Overall ICI building construction employment is expected to rise by 8 percent over the decade, adding 2,400 jobs.

Total non-residential employment is expected to increase by 16,000 workers to the 2021 peak – a 23 percent increase above 2017 levels. If the proposed major projects proceed as scheduled in 2019 and 2020, meeting peak labour demands will require planning and a coordinated effort by industry and its stakeholders. These efforts should also consider the anticipated release of large numbers of workers as projects peak and end.

Table 1 summarizes the percent change in employment by sector across two periods: the first captures the expected increased demand over four years to the expected 2021 peak, and the second shows the remaining six years of the scenario period as markets decline from peak activity.

Figure 2 shows the employment trends by sector for non-residential construction.

Figure 1: Non-residential employment distribution by sector, British Columbia, 2018, 2021, and 2027

Source: Statistics Canada, BuildForce Canada

THE AVAILABLE WORKFORCE

The pace of expansion in non-residential employment requirements and the expected recruitment challenges reflect the stacked timing of planned major projects, and meeting these demands are made more difficult by the recruitment challenges that have already emerged. Recent year-to-date Labour Force Survey (LFS) data for British Columbia shows unemployment rates in construction have fallen below 5 percent, while the province's job vacancy rates in construction, measured quarterly by Statistics Canada's Job Vacancy and Wage Survey (JVWS), have risen to 6 percent – the highest level since tracking began in 2015. Workers returning from Alberta and other provinces as conditions weaken, contributed to workforce supply between 2015 and 2017. This source of labour is diminishing, as rates of unemployment in other provinces have receded, and drawing additional workers to British Columbia may become increasingly difficult.

The BuildForce LMI system tracks labour supply and accounts for the change in the available labour force, including retirements, new entrants¹, and net in-mobility². First-time new entrants to the construction workforce from the local population aged 30 and younger only partly offset retirements. Meeting rising near-term employment demand requirements of 14,200 workers between 2018 and 2022, while replacing an additional 8,700 workers expected to retire over the same period, will require drawing in an additional 16,900 workers from outside the local non-residential workforce.

Table 1: Change in non-residential employment by sector, British Columbia

SECTOR		% CHANGE 2018–2022	% CHANGE 2023–2027
Total non-residential employment		20%	-7%
ICI	Industrial	0%	-8%
	Commercial, institutional and government	8%	6%
Engineering	Highways and bridges	49%	-40%
	Heavy industrial	54%	-24%
	Other engineering	13%	0%
Maintenance		13%	7%

Source: Statistics Canada, BuildForce Canada

¹ **New entrants** are measured by applying the traditional proportion of the provincial workforce that enters the construction industry. The projected estimate across the scenario period assumes that the construction industry can recruit this group in competition with other industries.

² **In-mobility** refers to the arrival of workers from outside the local construction industry. In-mobility includes the interprovincial employee workforce described above. Many members of this group will move quickly out of the province as work declines, and this out-mobility, even if it is a very short-term change, signals a weak market.

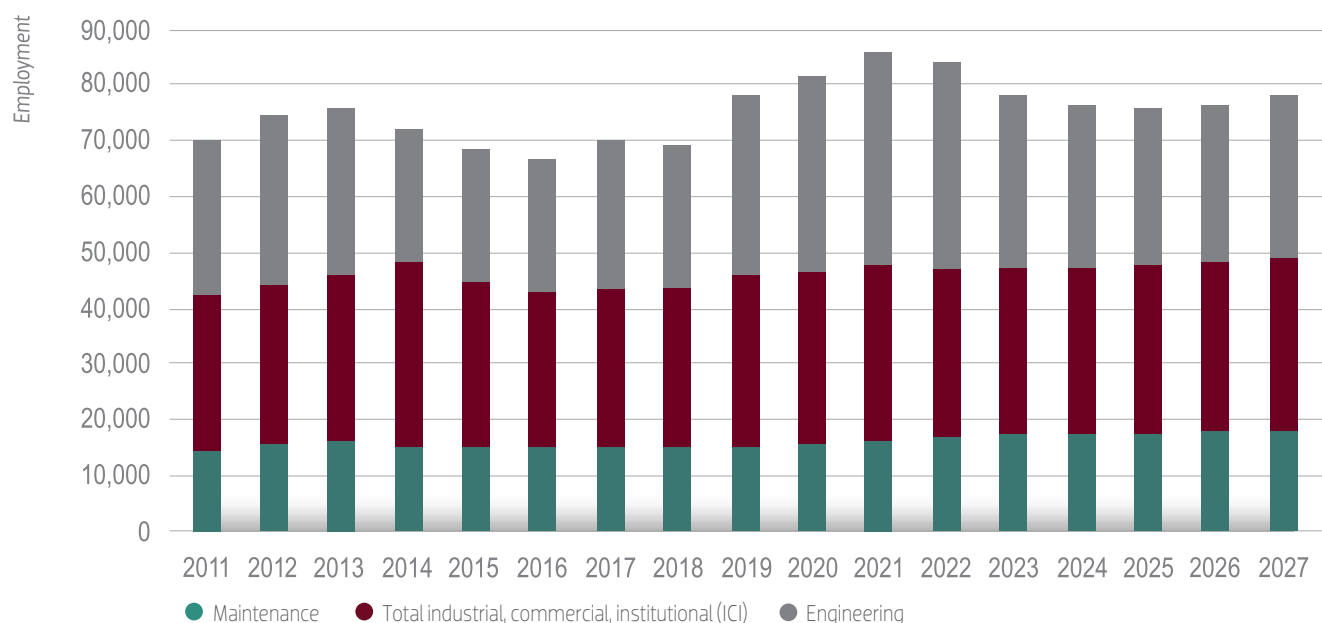
Figure 2: Non-residential construction employment growth outlook, British Columbia

Table 2 provides a summary of changes in the non-residential workforce in 2017, the five-year period between 2018 and 2022, and across the coming decade.

The anticipated growth in non-residential workforce requirements over the next five years is expected to tighten labour market conditions for many trades and occupations and create recruiting challenges as major projects reach peak activity. These challenges may be amplified by rising retirements, demands for specialized skills and experience, and the remote locations of some major projects.

The BuildForce ranking system isolates market conditions specific to non-residential construction. The results are summarized in Table 3.

NON-RESIDENTIAL RANKINGS, RISKS AND MOBILITY

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net in-mobility, and adjustments based on industry input. The rankings reflect non-residential market conditions unique to British Columbia based on current and proposed construction activity. In addition, assumptions on provincial economic and population growth, new entrants to the labour force, and migration patterns (interprovincial and international) are built into the forecast scenario and included in the ranking assessment.

The rankings for some trades working in the non-residential sector are suppressed due to the small size of the workforce (<100 workers) and limited statistical reliability when assessing labour

NON-RESIDENTIAL HIGHLIGHTS

- Workers from outside British Columbia helped to meet labour market requirements in 2017, but the supply of workers from outside the province may be more limited to meet the anticipated swell in major project demands over the near term.
- Current and proposed new major project investments are expected to add more than \$35 billion between 2019 and 2021. Projects are diverse, including major pipeline, LNG, mining, electrical generation and transmission, and other infrastructure projects.
- Non-residential employment is expected to increase by 16,000 workers to the 2021 peak – a 22 percent increase above 2017 levels, and one of the largest increases in the recent past.
- Age-related attrition is estimated at nearly 18,000 workers over the decade, adding significantly to overall hiring and training requirements.
- Major project completions after 2021 release more than 8,000 workers, but some are expected to be absorbed by rising maintenance and other non-residential construction markets.

Table 2: Change in the non-residential workforce, British Columbia

NON-RESIDENTIAL WORKFORCE ADJUSTMENT		2017	5 years 2018–2022	10 years 2018–2027
	Employment	2,800	14,200	8,500
Demand	Labour force change	2,000	16,000	8,900
	Retirements	1,600	8,700	17,700
Supply	New entrants	1,400	7,800	15,000
	Net mobility	2,200	16,900	11,700
Excess supply/(demand)		(700)	1,800	400

Source: BuildForce 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.

Table 3: Non-residential market rankings, British Columbia

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Boilermakers	4	3	4	4	4	3	2	3	3	3	3
Bricklayers	3	3	4	3	3	3	3	3	3	3	3
Carpenters	4	3	4	3	3	3	2	3	3	3	3
Concrete finishers	3	3	4	3	4	2	2	3	3	3	3
Construction estimators	4	3	4	3	4	3	2	3	3	3	4
Construction managers	4	3	4	4	4	3	2	3	3	3	4
Construction millwrights and industrial mechanics	4	3	4	3	5	4	2	2	3	3	3
Contractors and supervisors	4	3	5	5	4	3	2	2	3	3	4
Crane operators	4	3	3	3	3	3	2	3	3	3	3
Drillers and blasters	3	3	5	3	3	3	2	3	2	2	3
Electrical power line and cable workers	5	3	4	4	4	3	2	3	3	3	4
Electricians	3	3	4	4	4	3	2	3	3	3	3
Elevator constructors and mechanics	4	3	4	4	3	3	3	3	3	3	3
Floor covering installers	3	3	4	3	3	3	3	3	3	3	3
Gasfitters	4	3	5	3	3	3	3	3	3	3	4
Glaziers	3	3	4	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	5	3	3	2	2	3	2	3	3
Heavy-duty equipment mechanics	4	3	5	4	4	3	2	2	2	3	3
Insulators	3	3	4	3	3	4	2	2	3	3	3
Ironworkers and structural metal fabricators	4	3	5	3	5	2	2	3	2	3	3
Painters and decorators (except interior decorators)	3	3	4	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	4	4	4	3	2	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	4	4	3	3	3	3	3	3	4
Residential and commercial installers and servicers	3	3	4	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	4	3	3	3	3	3	3	3	3
Sheet metal workers	3	3	4	4	3	3	3	3	3	3	3
Steamfitters, pipefitters and sprinkler system installers	4	3	4	4	3	3	2	2	3	3	3
Tilesetters	4	3	4	3	3	3	3	3	3	3	3
Trades helpers and labourers	4	3	5	3	3	3	2	2	3	3	3
Truck drivers	4	3	5	3	4	3	2	3	3	3	3
Welders and related machine operators	4	3	5	4	3	2	2	3	3	3	3

Source: BuildForce Canada

market conditions at the sector level. Trades may also be excluded because they typically do not work in the sector being assessed (e.g., home building and renovation managers in non-residential). For British Columbia, non-residential rankings are reported for 32 trades and occupations.

Table 3 provides non-residential rankings for British Columbia, showing tightened labour markets last year. Market conditions for most trades and occupations should move toward balance in 2018, but the timing of planned major projects thereafter should raise demand requirements for many trades and occupations ahead of the local available supply as early as 2019. Under these circumstances, the industry may require workers from outside the local construction industry to keep pace with construction demands. Once projects are completed, labour markets should soften briefly and then return to balance, as shown by ranks of 3 after 2021.

RESIDENTIAL SECTOR

Population growth, rising household formations³, and other market forces such as speculative investment have contributed to sustaining British Columbia's expansion in housing construction since 2009. Housing starts came down slightly in 2017 after reaching peak levels and surpassing 41,000 units in 2016, but the pace of construction activity and employment demands strengthened due to the long construction period of larger multi-unit projects. Coinciding growth in renovation demands contributed to raising overall residential-sector employment to a peak in 2017, with tight labour markets and recruitment challenges.

The pace of residential activity is expected to recede in 2018 as many large condo projects near completion. This decline in activity is expected to extend through 2024 in line with slowing population growth and lower household formations.

Across the scenario period, moderate increases in renovation investment should partly offset declining new housing demand requirements leaving overall residential employment 10 percent lower in 2027 compared to the 2017 peak. The shift from new housing to renovations results in a much larger share of employment concentrated in renovation work.

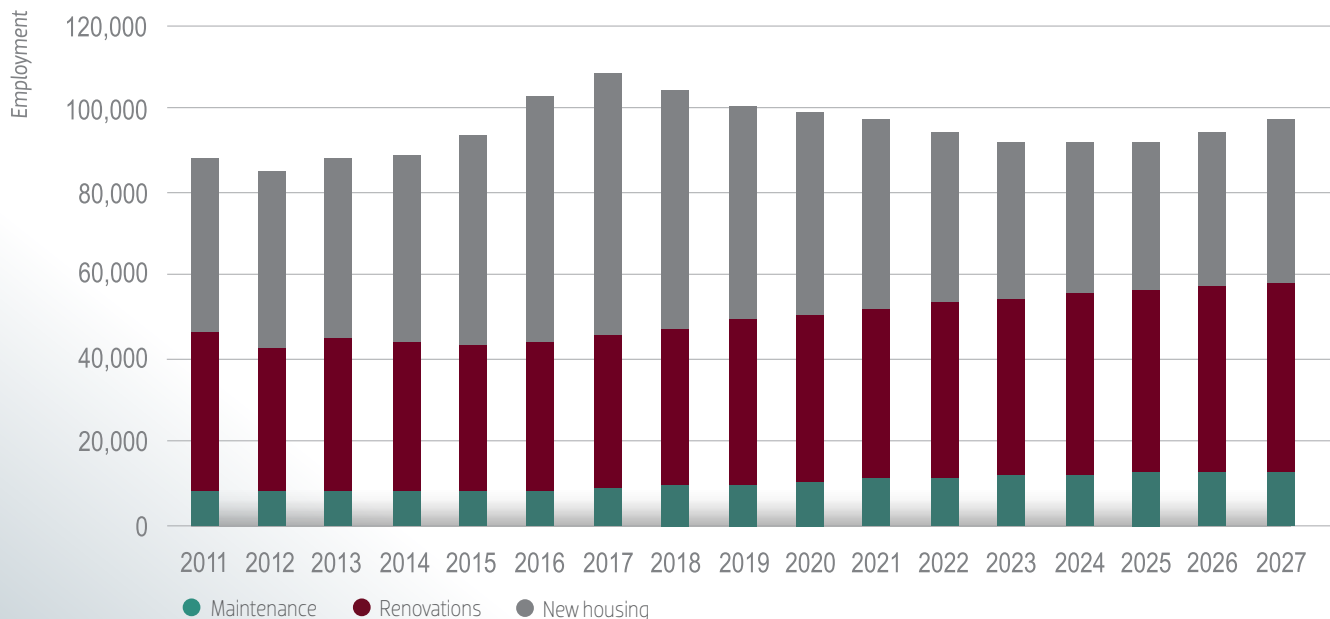
Figure 3 shows the employment trends by segment for residential construction.

THE AVAILABLE WORKFORCE

Recent increased activity and employment growth has driven down unemployment for most trades and occupations. The slowing pace of activity is expected to weaken labour market conditions in 2018 and 2019, but long-term unemployment rates are expected to remain low due to age demographics and expected retirements across the scenario period.

A projected downward trend in residential employment may lead some workers to leave the residential workforce to seek opportunities in other markets. Even as employment declines, however, industry must still contend with an aging workforce and the anticipated exit of an estimated 23,000 workers over the next decade. Attracting the estimated 17,900 potential new entrants

Figure 3: Residential construction employment growth outlook, British Columbia



Source: Statistics Canada, BuildForce Canada

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 how population growth is transformed into demand for new housing.

required during periods of decline may present employers with some significant human resource challenges.

Table 4 provides a summary of the estimated changes in the residential workforce in 2017, the five-year period between 2018 and 2022, and across the full 2018–2027 scenario period.

RESIDENTIAL RANKINGS, RISKS AND MOBILITY

Looking at Table 5, the tight markets in 2017 reflect the prolonged build-up in residential employment requirements and falling levels of unemployment. Projected declines in 2018 should ease labour market pressures, with overall market conditions returning to balance for most trades and occupations, as signalled by a rank of 3.

Increasing renovation demands are expected to partially offset anticipated declines in new housing construction, maintaining generally balanced markets across the scenario period for many trades. Conditions for trades and occupations more concentrated in new housing will likely weaken in 2018 and 2019.

The rankings for some trades working in the residential sector are suppressed due to the small size of the workforce (<100 workers) and limited statistical reliability when assessing labour market conditions at the sector level. Trades may also be excluded because they typically do not work in the sector being assessed

(e.g., boilermakers, millwrights in residential construction). For British Columbia, residential rankings are reported for 27 trades and occupations.

MEETING MARKET DEMANDS

In addition to project-driven labour market challenges over the near term, British Columbia's construction labour market may be strained over the long term due to aging of the population.

Retirements (including mortality) are expected to draw nearly 41,000 workers out of the province's construction industry over the next 10 years – 22 percent of the current labour force. These dynamics have the potential to tighten labour markets and may create a skills vacuum that requires proactive planning.

Over the coming decade, the province's population growth should average 1 percent per year. Migration is expected to become a key driver of population growth as British Columbia's population ages. As the gap between births and deaths continues to narrow over the next 10 years, the natural rate of population growth (births less deaths) is expected to fall. Anticipated economic growth and positive job prospects in the province will play a role in the attraction of out-of-province workers. Figure 4 (page 10) shows the factors contributing to British Columbia's population growth.

Table 4: Changes in the residential workforce, British Columbia

RESIDENTIAL WORKFORCE ADJUSTMENT		2017	5 years 2018–2022	10 years 2018–2027
	Employment	5,600	-13,900	-10,800
Demand	Labour force change	6,700	-14,200	-12,500
	Retirements	2,300	11,800	23,100
Supply	New entrants	2,100	9,400	17,900
	Net mobility	6,900	-11,800	-7,200
Excess supply/(demand)		1,200	(300)	(1,700)

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS

- Housing starts ebb from the 41,800-unit peak in 2016, to an estimated 40,600 in 2017.
- New-housing-related employment is expected to decline by 23,700 jobs (38 percent) over the coming decade, offset by 8,450 new jobs (23 percent) tied to rising renovation requirements.
- Employment requirements in the renovation market begin to exceed new housing by 2022. At the end of the scenario period, renovation and maintenance work account for almost half (47 percent) of residential employment in the province.

Table 5: Residential market rankings, British Columbia

TRADES AND OCCUPATIONS – RESIDENTIAL	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Bricklayers	4	3	2	3	3	3	3	3	3	3	3
Carpenters	4	2	2	3	3	2	3	3	3	3	3
Concrete finishers	4	3	3	3	3	3	3	3	3	3	3
Construction estimators	4	2	2	3	3	2	2	3	3	3	4
Construction managers	3	2	2	3	3	2	2	3	3	3	4
Contractors and supervisors	4	2	2	3	3	3	3	3	3	3	4
Crane operators	3	2	2	2	2	2	2	2	3	4	4
Electricians	4	3	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	3	3	3	3	3	3	3	3	3	4
Floor covering installers	4	3	3	3	3	3	3	3	3	3	4
Gasfitters	4	2	2	3	3	2	2	3	3	3	4
Glaziers	4	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	2	2	3	3	2	3	3	3	3	3
Home building and renovation managers	4	3	3	3	3	3	3	3	3	3	4
Insulators	4	2	2	3	3	2	3	3	3	3	3
Ironworkers and structural metal fabricators	4	3	3	2	2	2	2	3	3	3	3
Painters and decorators (except interior decorators)	4	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	4	3	3	3	3	3	3	3	3	3	4
Refrigeration and air conditioning mechanics	4	3	3	3	3	3	3	3	3	3	4
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	4	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	2	2	3	3	2	3	3	3	3	4
Tilesetters	4	3	3	3	3	3	3	3	3	3	4
Trades helpers and labourers	4	2	2	3	3	2	3	3	3	3	3
Truck drivers	4	2	2	3	3	3	3	3	3	3	3
Welders and related machine operators	4	3	3	3	3	3	3	3	3	3	4

Source: BuildForce Canada

An important driver of employment requirements over the scenario period will be the aging demographics in British Columbia. Over the past decade, the province has seen the share of the population that is 65 years or older increase, while the share of the population in their prime working years (25-54 years old) has been declining. Simultaneously, the share of the population that is 15-24 years old is expected to decline across the scenario period. Table 6 indicates these trends are expected to persevere over the coming decade.

These shifts in demographics have the potential to tighten labour markets, as the share of the population that is potentially retiring or has a lower labour force participation rate (65+ years old) is increasing, while the share of the population that is potentially available to enter the workforce (15-24 years old) is declining.

Industry stakeholders may need to find alternative sources of labour to fill the gap of retiring workers.

Based on historical trends, the B.C. construction industry is expected to draw an estimated 33,000 first-time new entrants from the local population, aged 30 and younger, over the next decade to 2027. In the scenario period, BuildForce Canada expects the retiring workforce to exceed the number of youth coming into construction, forcing the industry to look to other industries and other provinces for additional new workers to augment the available pool of local new entrants. Moreover, as the skills of new entrants are not typically equivalent to the skills of older workers, some further project management challenges could emerge due to the increasing numbers of workers leaving the industry due to retirement.

Adding to the recruitment challenges will be increased competition for skilled trades from other industries experiencing similar demographic changes. To overcome these challenges, the construction industry will need to improve its recruitment of new entrants, increase initiatives to engage underrepresented supply sources, including Indigenous people and women, or acquire workers from other industries or from outside of the province.

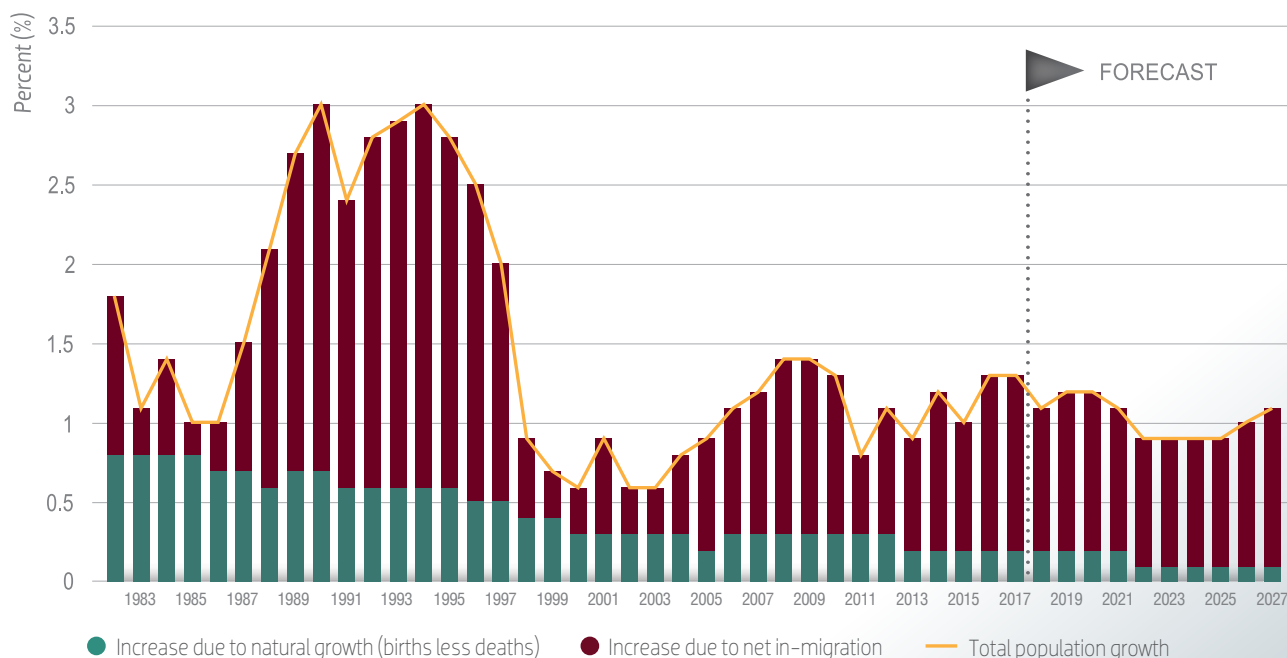
Canada's Indigenous population has the country's highest rate of population growth and a higher propensity to choose construction as their career choice. An estimated 18 percent of all Indigenous people in Canada currently reside in British Columbia and account for about 3.8 percent of the local construction workforce.

Table 6: Population age distribution (%), British Columbia

AGES	2017	2027
0–14	14.5	14.2
15–24	12.2	9.7
25–54	40.8	40.0
55–64	14.1	13.0
65+	18.3	23.2

Source: Statistics Canada, BuildForce Canada

Figure 4: Sources of population growth (%), British Columbia



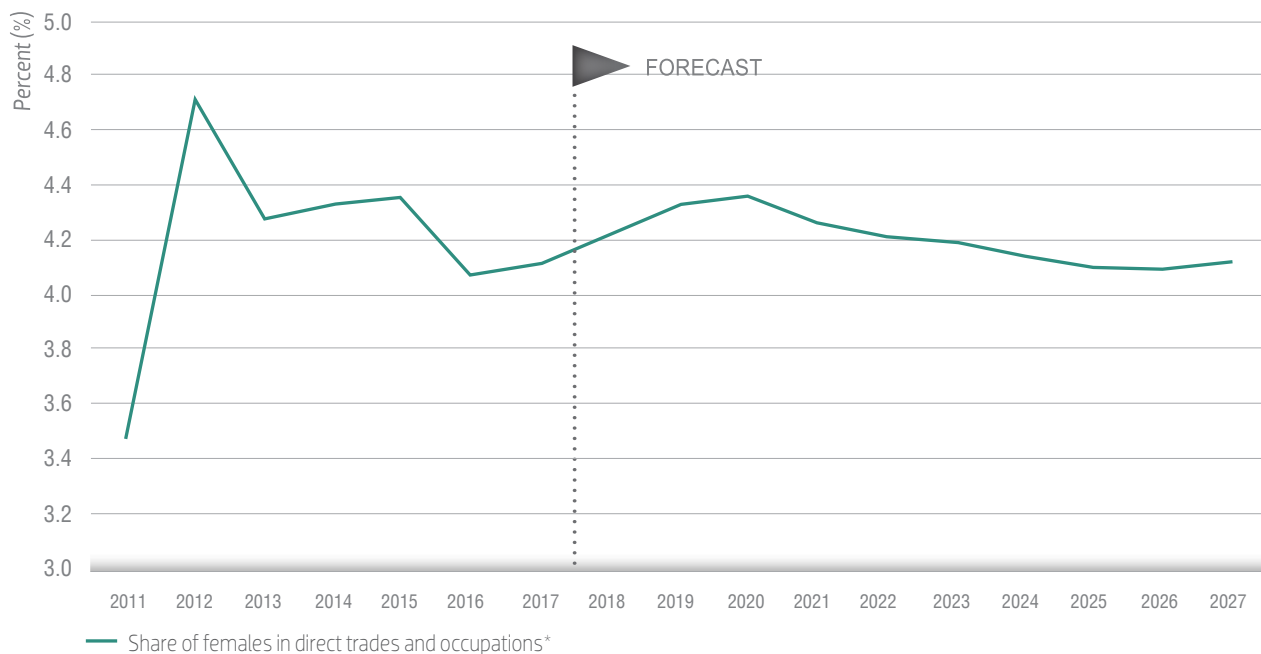
Source: Statistics Canada, BuildForce Canada (2018–2027)

Across the scenario period, British Columbia's female population is expected to grow faster than their male counterparts. The province's construction workforce is made up of approximately 12 percent women, of which about 28 percent work directly on construction projects, while the remaining 72 percent work primarily in administrative and management-related occupations in the construction industry. This translates into women representing 4 percent of the province's direct trades and occupations construction workforce. Figure 5 illustrates the share of women in direct trades and occupations based on current recruitment patterns of females into the workforce.

Under current recruitment patterns, the share of women in construction trades is expected to rise during peak demands, but revert to current levels by 2027. As construction job prospects improve they are expected to encourage women into pursuing construction; however, without further incentives to retain them, many are expected to become discouraged during the down-cycle and exit the industry.

Table 7 shows total construction employment levels by gender for British Columbia.

Figure 5: Share of women in direct trades and occupations, British Columbia



* **Direct trades and occupations** refers to the 34 trades and occupations tracked by BuildForce Canada, which excludes administrative-type occupations.

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and 2011 National Household Survey (NHS)

10-YEAR AVERAGE

1%



POPULATION
GROWTH

47,800



BIRTHS

41,200



DEATHS

44,400



NET
MIGRATION

BY 2027

42





AVERAGE AGE OF
CONSTRUCTION
WORKFORCE

21.6%



PERCENT OF CURRENT
LABOUR FORCE LOST TO
RETIREMENT

Table 7: Construction employment by gender, British Columbia (total direct trades and occupations)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	170,700	166,300	170,700	172,700	175,100	170,700	163,100	160,900	160,700	163,800	168,500
	7,300	7,300	7,700	7,900	7,800	7,500	7,100	7,000	6,900	7,000	7,200

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and 2011 National Household Survey (NHS)

CONCLUSIONS AND IMPLICATIONS

The 2018–2027 *Construction and Maintenance Looking Forward* scenario for British Columbia anticipates a rapid increase in non-residential construction employment requirements over the medium term to 2021 alongside a long-term decline in residential demands. The timing and scale of anticipated non-residential demands pose a potential for recruitment challenges to emerge. These challenges may be amplified by expected retirements, the demands for specialized skills and experience, and the remote locations of some major projects.

Meeting the expected requirements while contending with rising retirements will require a coordinated effort by industry and its stakeholders. Industry facilitation of mobility across sectors and regions will be needed to meet peak demands.

The industry scenario-based approach developed by BuildForce Canada to assess future labour market conditions provides a powerful planning tool for industry, government, and other stakeholders to better track labour market conditions and identify potential pressure points. The assumed timing of proposed major projects in the 2018–2027 outlook underpins the market conditions anticipated. Any changes in the anticipated timing of major projects such as the proposed LNG, pipeline, and other planned engineering projects present risks to anticipated market conditions.

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Canada

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