

# NOVA SCOTIA

Bracing for expansion in public-infrastructure investment

## HIGHLIGHTS 2021-2030

Nova Scotia's construction requirements are expected to accelerate in 2021, propelled by an economic recovery and significant public-sector investment.

Construction activity in the province was only moderately hindered by the impacts of COVID-19 in 2020, and the negative effects were largely confined to the residential and commercial markets.

An anticipated recovery in both residential and commercial investment, alongside a ramp-up in requirements related to numerous major health- and education-sector projects and a proposed gold mine project, is expected to drive a strong expansion in construction employment across 2021 and 2022, with the strongest growth concentrated in the non-residential sector.

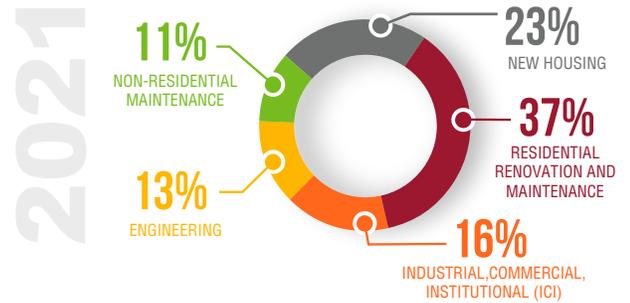
Modest interim declines are likely to follow as projects are completed, but stable levels of employment are expected over the long term, sustained by rising investment in industrial and commercial building construction and increased non-residential maintenance requirements.

Older age demographics and slowing population growth contribute to a downward trend in new homebuilding after 2025, but overall residential-sector investment is expected to experience modest growth, driven by continued in-migration to the province and rising levels of residential renovation investment.

In addition to strong near-term growth, industry will need to contend with the expected retirement of nearly 8,700 workers over the next decade. Nova Scotia's construction industry is projected to draw in close to 5,900 new entrants from the local population, leaving a gap of nearly 3,900 additional workers that will be needed to supplement provincial labour force requirements. Addressing the worker deficit will require a

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### DISTRIBUTION OF CONSTRUCTION EMPLOYMENT IN 2021, NOVA SCOTIA



### 10-YEAR WORKFORCE OUTLOOK FOR NOVA SCOTIA



### HIGHLIGHTS

- New-home construction will resume growth in 2021 and continue through 2025 before housing starts begin to moderate over the latter half of the decade.
- Non-residential construction employment is expected to rise by 2,000 workers between 2020 and 2023 to meet peak requirements for institutional building construction.
- Hiring needs are likely to be driven by the expected retirement of 8,700 workers, or 28% of the province's 2020 construction labour force over the next decade.



AVERAGE UNEMPLOYMENT RATE

11.7%

### 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.

combination of strategies that include enhanced local recruitment and training, including the recruitment of immigrants and newly arrived immigrants, promoting career opportunities to workers with comparable skill sets who have been displaced from other industries, and drawing on construction workers from other provinces where labour demands have softened.

## NOVA SCOTIA CONSTRUCTION OUTLOOK

Nova Scotia's construction activity was constrained in 2020 due to the impacts of COVID-19, but the market is expected to surge ahead in 2021 and 2022, driven by several health care, education, roadwork, and other infrastructure projects, and an anticipated recovery in tourism, mining, and manufacturing activity. The overlapping timing of project demands is expected to increase non-residential requirements and further tighten labour markets as projects rise to an expected peak in 2023.

Market challenges are not likely to subside until 2024, following the peak in institutional project requirements, but employment is sustained at high levels through 2026 by several long-term projects, including the Queen Elizabeth II Infirmary site and Cape Breton Cancer Centre. Commercial investment is expected to strengthen over the latter half of the scenario period supported by stronger economic growth stemming from the start of the second phase of the federal Canadian Surface Combatant shipbuilding program. Although a final investment decision has not yet been made, the addition of a proposed major liquefied natural gas (LNG) project could significantly alter the Nova Scotia outlook.

With lower borrowing costs, strong momentum in demand for new homes sustained a strong housing market in 2020, offsetting the negative economic impacts of COVID-19. Housing starts dipped slightly in 2020, but are expected to remain at high levels through to 2025 before declining over the latter half of the scenario period. Moderate declines in related employment are expected to be absorbed by rising renovation investment, leaving overall residential employment up slightly (+2.5%) from 2020 levels at the end of the 10-year scenario period.

Overall, employment for both sectors is projected to increase by approximately 2,600 workers, or 10% between 2020 and 2023, before receding over the latter half of the scenario period. In addition to meeting modest expansion demands, the industry will also need to replace 8,700 workers expected to retire over the next decade. Meeting these requirements will be made more difficult by increased competition for new entrants from other industries, especially in the manufacturing, shipbuilding, and health care sectors.

## SECTOR INSIGHTS

The following sections provide sector-specific insights into the provincial residential and non-residential labour markets.

The BuildForce LMI system tracks supply and accounts for the change in the available labour force, including retirements, new entrants<sup>1</sup>, and net mobility<sup>2</sup>.

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net mobility, and adjustments based on industry input. The rankings reflect residential and non-residential market conditions unique to the province 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 are suppressed due to the small size of the workforce (fewer than 100 workers) and limited statistical reliability when assessing labour market conditions at the sector level. Some trades are also excluded because they typically do not work in the sector being assessed (e.g., boilermakers and millwrights in residential construction, and homebuilding and renovation managers in non-residential construction).

For Nova Scotia, rankings are reported for 18 residential and 23 non-residential trades and occupations.

## RESIDENTIAL SECTOR

The province entered the pandemic with a strong housing market, which was only marginally impacted by the COVID-19 restrictions. Housing starts surged 20% in 2018, exceeding 4,780 units, with similar levels sustained in 2019. Housing starts saw a small reduction (-4%) in 2020, falling to approximately 4,500 units. A modest rise in housing demand is anticipated toward mid-decade, as population growth continues to remain elevated, before trending downward, as interest rates are projected to rise. Renovation expenditures remained relatively unchanged in 2020 but are anticipated to experience growth over the coming decade, rising 27% to 2030.

Figure 1 shows the employment trends by sector for residential construction. Residential employment is expected to rise by just under 890 workers by 2025, with growth driven primarily by renovation work.

## THE AVAILABLE LABOUR FORCE

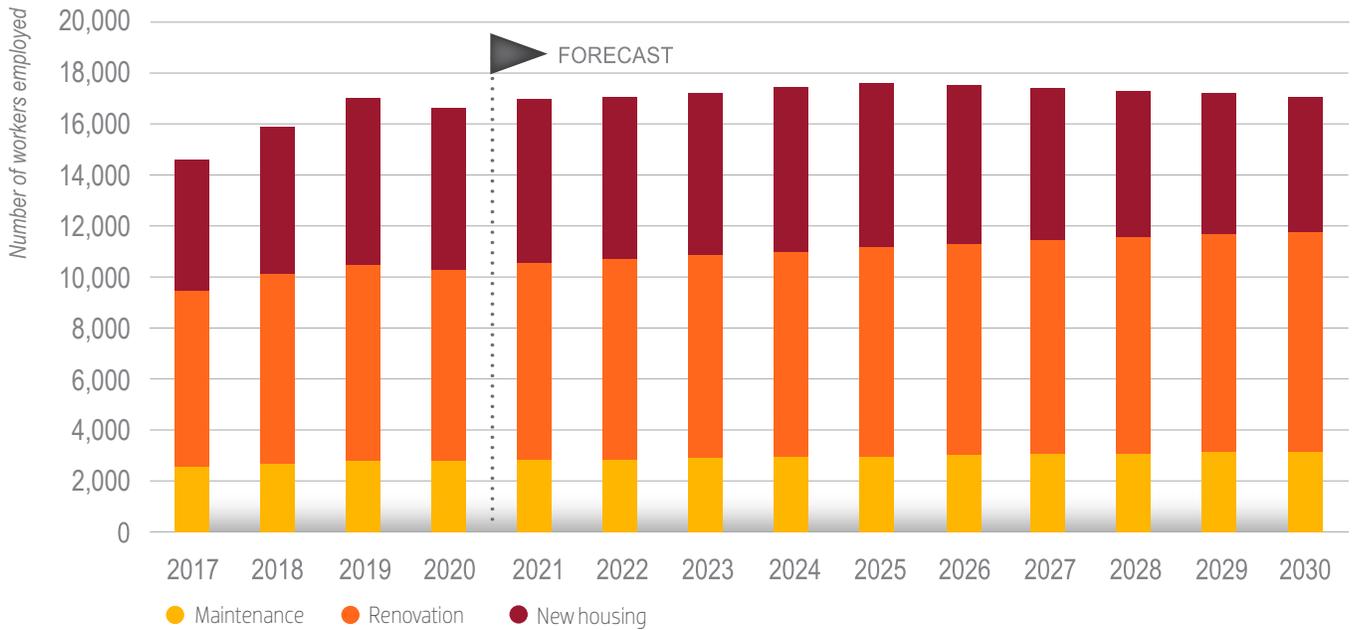
The retirement of 5,250 workers from the residential labour force will be the dominant driver for hiring over the next decade. The rise in overall employment will likely require an additional 419 workers over the same period, increasing the overall recruitment requirement to 5,669 workers. Assuming approximately 3,400 new-entrant workers under the age of 30 can be recruited locally, labour force pressure will likely be moderated, but unless recruitment is increased, a potential deficit of 2,270 workers is expected to accrue by 2030.

Figure 2 provides a summary of the estimated changes in the residential labour force across the full 2021–2030 scenario period.

<sup>1</sup> **New entrants** are measured by applying the traditional proportion of the provincial labour force 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.

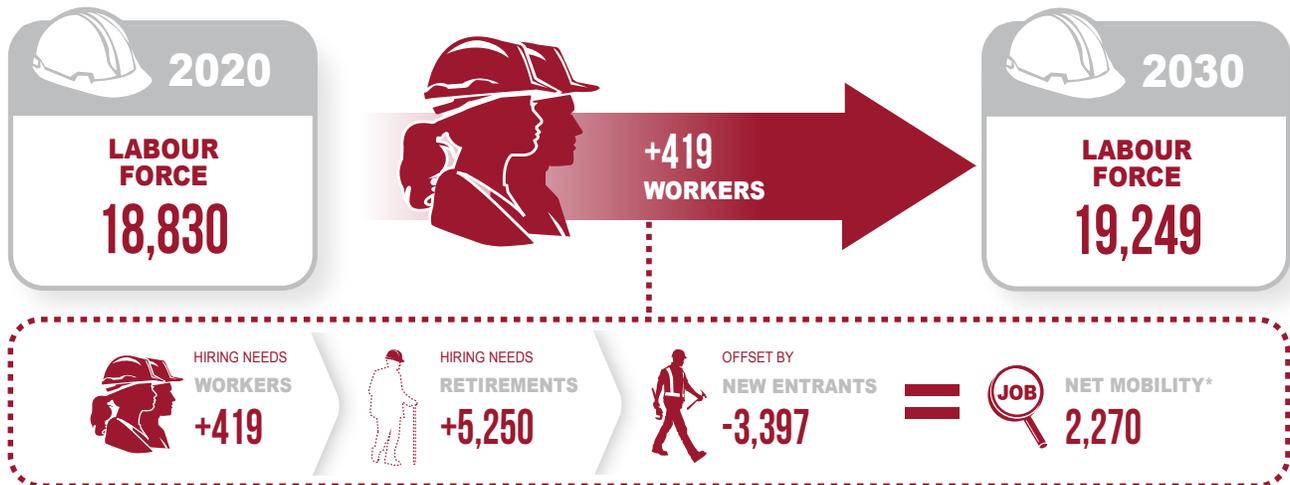
<sup>2</sup> **Net mobility** refers to the movement of labour in and out of the local construction industry labour force. In-mobility captures the movement into the labour force of out-of-province industry workers and/or workers from outside the industry. Many members of this group will move quickly out of the provincial labour force as work declines, referred to as out-mobility.

**Figure 1: Residential construction employment growth outlook, Nova Scotia**



Source: Statistics Canada, BuildForce Canada (2021-2030)

**Figure 2: Changes in the residential labour force, Nova Scotia**



\* Net mobility refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

## RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

Residential labour markets were generally balanced in 2020, as lower levels of housing starts relieved market pressures on some trades more concentrated in new-housing construction, while markets involved in renovation work remained tight, as shown in Table 1. Moving forward, moderate growth in housing starts and renovation activity is expected to raise market challenges in 2021 but sustain generally balanced conditions over the remainder of the decade.

## 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 1: Residential market rankings, Nova Scotia**

| TRADES AND OCCUPATIONS – RESIDENTIAL                      | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|------|------|------|------|------|------|------|------|------|------|------|
| Bricklayers   | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Carpenters  | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Concrete finishers  | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Construction estimators                                   | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Construction managers                                     | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Contractors and supervisors                               | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Electricians  | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Floor covering installers                                 | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Heavy equipment operators (except crane)                  | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Homebuilding and renovation managers                      | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Painters and decorators                                   | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Plasterers, drywall installers and finishers, and lathers | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Plumbers  | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Residential and commercial installers and servicers       | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Roofers and shinglers                                     | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Sheet metal workers                                       | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Trades helpers and labourers                              | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| Truck drivers   | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |

Source: BuildForce Canada

## NON-RESIDENTIAL SECTOR

Increased investment in health care projects and road, highway, and bridge work, along with the ongoing gas decommissioning projects, left the non-residential sector relatively unscathed by COVID-19 restrictions in 2020. The forementioned health care and road work projects will support growth in the sector to 2023 before winding down to 2028. Bolstered by the second phase of the federal government's shipbuilding program, strengthening market conditions supporting broader economic growth will have a positive impact on industrial and commercial construction markets midway through the scenario period.

As projects begin to wind down following 2023, employment is expected to recede but remain above 2019 levels for the remainder of the scenario period. Due to heightened institutional investment, the ICI (industrial, commercial, institutional) sector is anticipated to grow by 1,485 workers by 2023, with declines expected thereafter as current projects wind down. Engineering investment will follow a similar path, growing approximately 650 workers by 2023 before declining modestly to 2030. Maintenance employment is anticipated to decline in the near term before rising thereafter to 2030, growing by approximately 240 workers from 2020 levels. The start of a proposed large-scale LNG project, currently being tracked but not included in the outlook scenario, would significantly tighten labour market conditions in Nova Scotia.

Figure 3 tracks the distribution of non-residential employment by sector between 2020 and 2030.

Table 2 summarizes the percent change in non-residential employment by sector across two periods: the first captures the expected moderate rise over the next five years to 2025, and the second, the remainder of the period to 2030.

Figure 4 shows the employment trends by sector for non-residential construction across the scenario period.

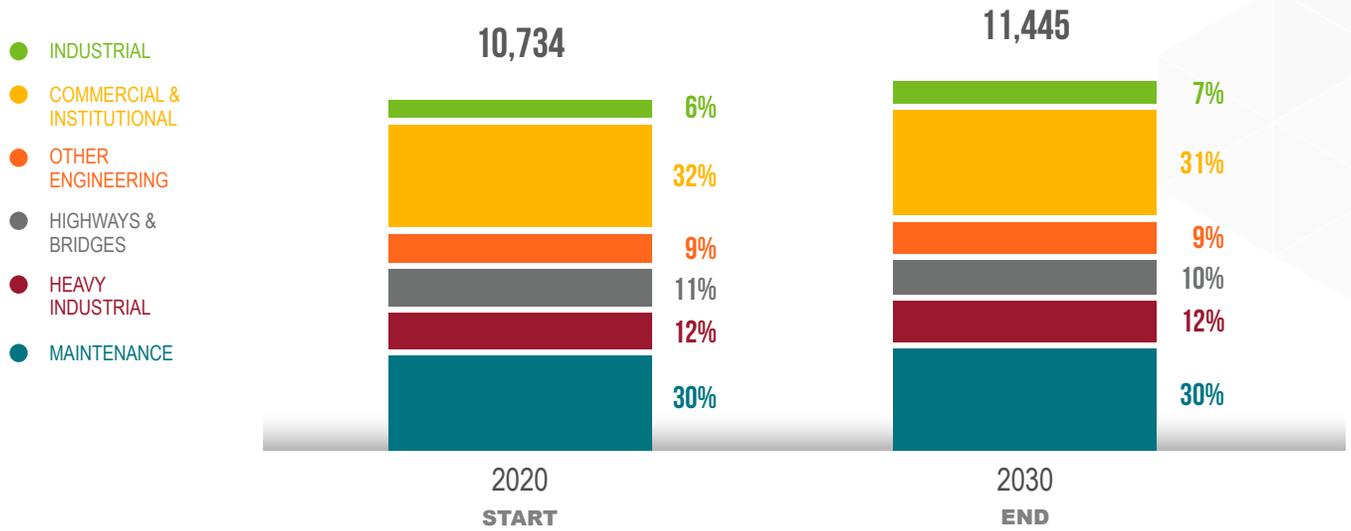
**Table 2: Changes in non-residential employment by sector, Nova Scotia**

| SECTOR                           |  | % CHANGE<br>2021–2025 | % CHANGE<br>2026–2030 |
|----------------------------------|--|-----------------------|-----------------------|
| Total non-residential employment |  | 13%                   | -6%                   |
| ICI* buildings                   | Industrial                               | 27%                   | 1%                    |
|                                  | Commercial, institutional and government | 31%                   | -21%                  |
| Engineering                      | Highways and bridges                     | -4%                   | 2%                    |
|                                  | Heavy and other engineering              | 13%                   | -3%                   |
| Maintenance                      |  | -1%                   | 9%                    |

Source: Statistics Canada, BuildForce Canada (2021-2030)

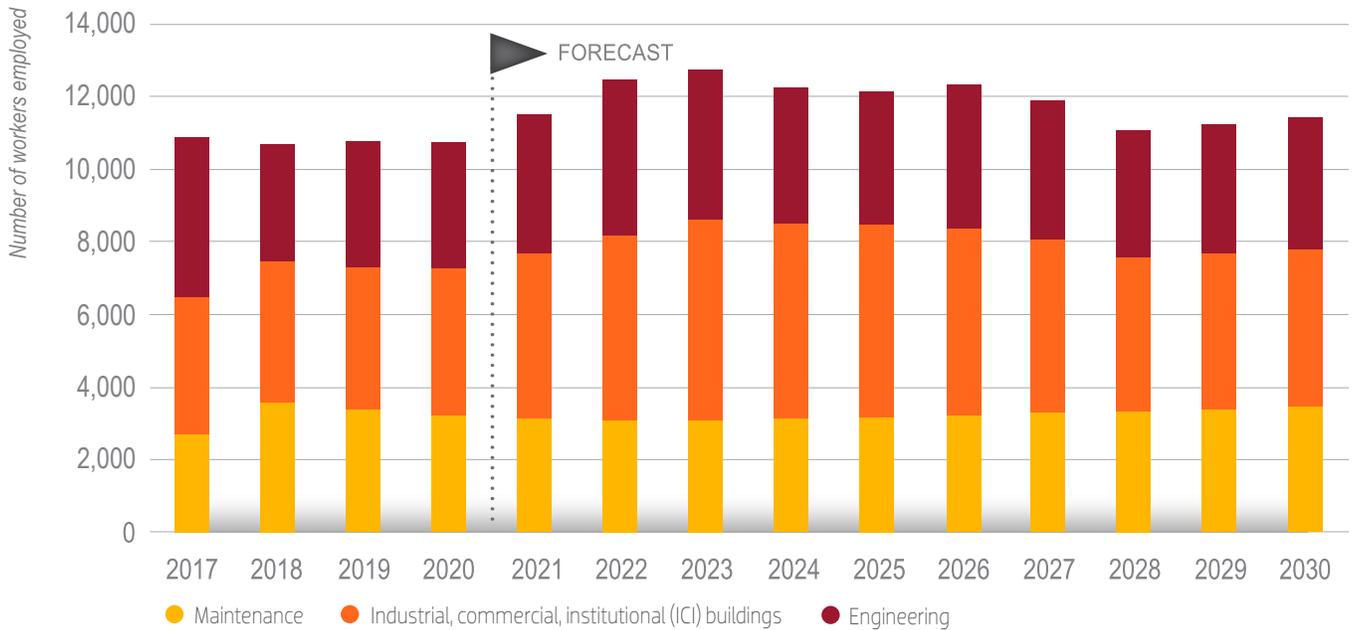
\* industrial, commercial, institutional

**Figure 3: Non-residential employment distribution by sector, Nova Scotia, 2020 and 2030**



Source: Statistics Canada, BuildForce Canada (2021-2030)

**Figure 4: Non-residential construction employment growth outlook, Nova Scotia**



Source: Statistics Canada, BuildForce Canada (2021-2030)

## THE AVAILABLE LABOUR FORCE

Nova Scotia has one of the oldest populations in Canada. Population growth is expected to slow over the next decade, driven by negative natural population growth<sup>3</sup> and modest levels of in-migration to the province. This implies that the pool of local youth entering the labour force is declining as retirements are rising.

Population demographics are expected to lower normal rates of unemployment<sup>4</sup>, which will further reduce the pool of available labour to meet peak labour demands. Meeting future demands will require planning and the recruitment of workers from outside the local non-residential construction market; however, this may be partially addressed by the divergent trends emerging between residential and non-residential employment demands, which may create some mobility between the two construction sectors.

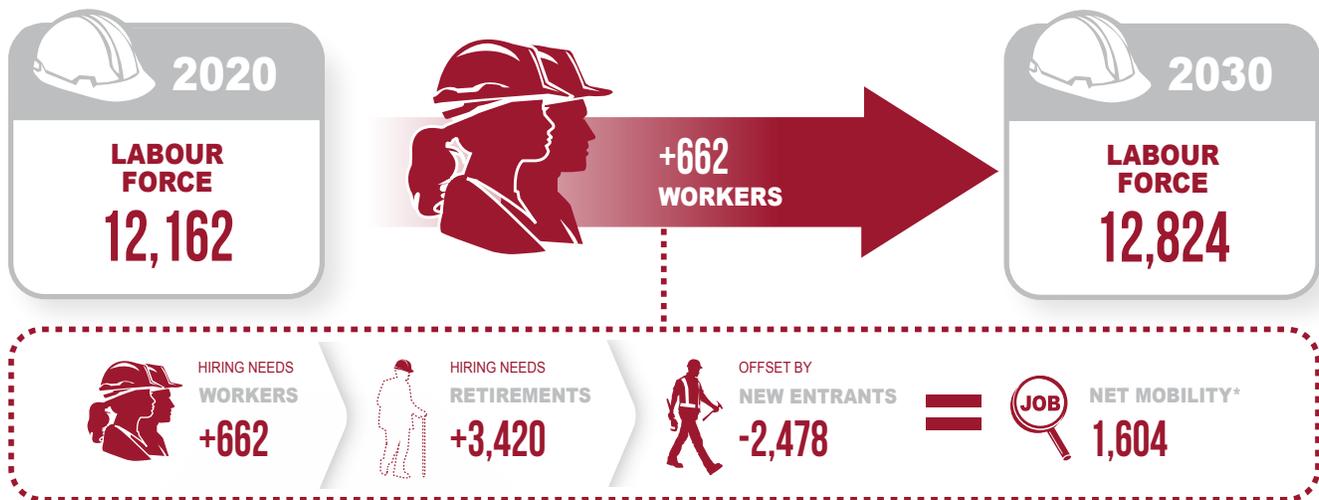
More than 3,400 non-residential workers are expected to retire over the next decade. This exceeds the estimated 2,478 first-time new entrants under the age of 30 expected to be drawn into the construction labour force from the local population.

Figure 5 provides a summary of the estimated changes in the non-residential labour force across the full 2021–2030 scenario period.

## NON-RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

Table 3 shows that non-residential rankings for Nova Scotia are expected to be tight for some trades in 2020, while most will remain balanced. Market conditions are anticipated to tighten across a broader group of trades in 2021 and 2022 as activity increases with numerous health care project requirements. The market is then expected to weaken slightly as some of these projects begin to wind down and weaken further in 2024 as major road and bridge work projects end. The remainder of the scenario period will reflect mostly balanced market conditions, except for a brief period in 2027 and 2028 when work ends on the currently tracked major health care projects, producing lower employment demands for some trades.

**Figure 5: Changes in the non-residential labour force, Nova Scotia**



\* **Net mobility** refers to the number of workers needed to be brought into the industry from other industries or other provinces to meet rising demands or the number of workers that exit the industry in downturns. Positive net mobility means that industry must attract workers, while negative net mobility arises from an excess supply of workers in the local construction labour force.

Note: Due to rounding, numbers may not add up to the totals indicated.

Source: BuildForce Canada

<sup>3</sup> **Natural rate of population growth** refers to the growth in the population due to the number of births relative to the number of deaths, which leads to a positive or negative natural rate.

<sup>4</sup> **Normal unemployment** or **natural unemployment** refers to the unemployment that results from workers moving from one job to another. This unemployment rate exists because some workers are in-between jobs, some workers' skills do not align with employers' needs, or because there is a mismatch in the wage expectations between employers and workers. For Nova Scotia, the natural rate of unemployment had been declining since the early 1990s and stabilized between 13-16% in the late 2000s.

**Table 3: Non-residential market rankings, Nova Scotia**

| <b>TRADES AND OCCUPATIONS – NON-RESIDENTIAL</b>            | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> | <b>2027</b> | <b>2028</b> | <b>2029</b> | <b>2030</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Boilermakers   | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           |
| Bricklayers  | 4           | 4           | 4           | 4           | 3           | 3           | 3           | 3           | 3           | 3           | 3           |
| Carpenters   | 3           | 4           | 4           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Construction estimators                                    | 4           | 4           | 4           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Construction managers                                      | 4           | 4           | 4           | 4           | 3           | 3           | 4           | 3           | 2           | 3           | 3           |
| Construction millwrights and industrial mechanics          | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           |
| Contractors and supervisors                                | 4           | 4           | 4           | 4           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Crane operators  | 4           | 4           | 4           | 3           | 2           | 3           | 3           | 3           | 2           | 3           | 3           |
| Electricians   | 3           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Elevator constructors and mechanics                        | 4           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Heavy equipment operators (except crane)                   | 3           | 4           | 4           | 3           | 2           | 3           | 4           | 3           | 2           | 3           | 3           |
| Heavy-duty equipment mechanics                             | 3           | 4           | 4           | 3           | 2           | 3           | 3           | 3           | 3           | 3           | 3           |
| Insulators   | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           |
| Ironworkers and structural metal fabricators               | 3           | 4           | 4           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Painters and decorators                                    | 3           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Plasterers, drywall installers and finishers, and lathers  | 3           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Plumbers   | 4           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Refrigeration and air conditioning mechanics               | 4           | 4           | 4           | 4           | 3           | 3           | 3           | 2           | 2           | 3           | 3           |
| Sheet metal workers  | 3           | 4           | 3           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Steamfitters, pipefitters, and sprinkler system installers | 3           | 4           | 4           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |
| Trades helpers and labourers                               | 3           | 4           | 4           | 3           | 2           | 3           | 3           | 3           | 2           | 3           | 3           |
| Truck drivers  | 3           | 4           | 4           | 3           | 2           | 3           | 3           | 3           | 3           | 3           | 3           |
| Welders and related machine operators                      | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 2           | 3           | 3           |

Source: BuildForce Canada

## BUILDING A SUSTAINABLE LABOUR FORCE

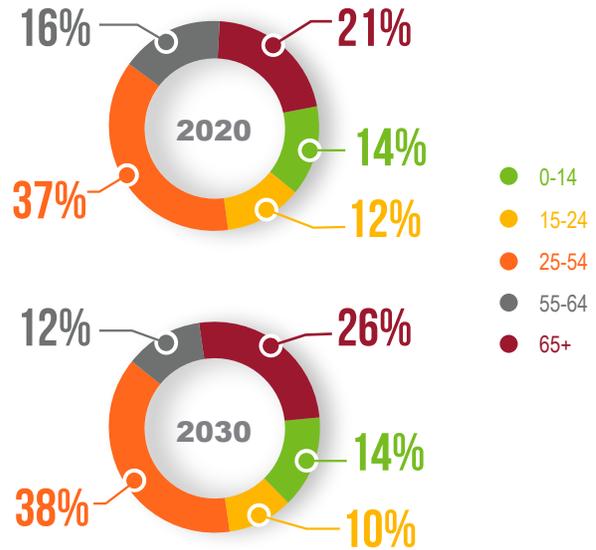
With an older population, Nova Scotia must remain focused on attracting, training, and retaining qualified workers as the provincial labour force continues to age and retirements increase across the outlook period. Recruiting workers to replace the estimated 8,670 workers expected to retire from the construction industry will require proactive planning to mitigate the risks of a skills shortage. Retiring workers take with them years of experience that are not immediately matched by a first-time new entrant to the industry.

Steady aging of Nova Scotia's population is expected to drive increased retirements in most industries and increase competition for qualified younger workers. Over the next 10 years, the share of the population in the older age bracket (65 years and over) is expected to increase, and at the same time, the share of the youth population (15-24 years old) is expected to decline (see Figure 6). These demographic shifts have the potential to tighten labour markets, as labour force participation by older workers is much lower than that of their younger counterparts.

Nova Scotia's population declined between 2012 and 2015 due to outflows of residents to other provinces and a negative natural rate of population growth. The provincial population resumed growth between 2016 and 2019, supported by record high levels of international migration. In 2019, population growth surpassed 1.1%, as another year of strong international migration combined with inflows of people from other provinces. In 2020, population growth fell considerably, a trend anticipated to continue over the near term as net in-migration is expected to recede to more normal levels before stabilizing at levels well above historical averages. At the same time, the province's aging population is expected to continue leading natural population growth lower across the decade.

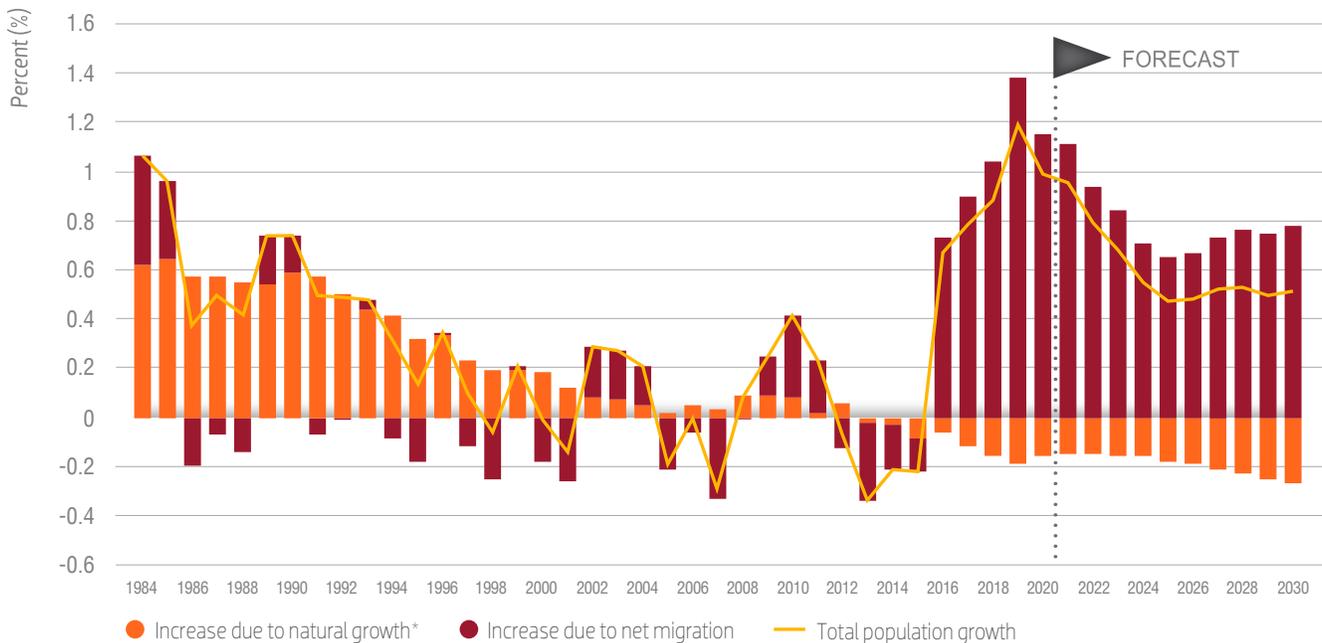
These trends lead Nova Scotia's population growth lower throughout the scenario period, with stronger near-term declines related to the reduction in migration and long-term declines related to the drag from an aging population. Components of population growth for Nova Scotia are presented in Figure 7.

Figure 6: Population age distribution, Nova Scotia



Source: BuildForce Canada

Figure 7: Sources of population growth (%), Nova Scotia



\* Natural rate of population growth refers to the growth in the population due to the number of births relative to the number of deaths, which leads to a positive or negative natural rate.

Source: Statistics Canada, BuildForce Canada (2021-2030)

Based on historical trends, Nova Scotia's construction industry is expected to draw an estimated 5,875 first-time new entrants aged 30 and younger from the local population over the next decade. In the scenario period, the pace of retirements exceeds the number of youth coming into construction, forcing the industry to expand recruiting strategies to include women, the Indigenous population, other industries, other provinces, and other countries for additional workers to augment the available local labour supply.

## APPRENTICESHIP

New registrations in the 18 largest trade programs peaked at 1,280 in 2015, resulting in increased supply of certified workers. Registrations have fluctuated over recent years but have remained around 900 registrations per year. Limited available data suggest COVID-19 has resulted in a steep decline in new registrations relative to employment and imposed significant obstacles to the delivery of in-school training, testing, and certification. These impacts are likely to reduce the near-term numbers of new certified workers.

Nova Scotia is projected to require just under 3,260 new certified journeypersons to sustain the current workforce shares of certifications and to keep pace with employment and replacement demand across all industries over the scenario period.

Table 4 provides a provincial overview of the anticipated certification requirements for the 18 largest construction trade programs in all industries and in construction. The table also provides the target number of new entrants required to fulfill demand requirements over the scenario period, taking into account trends in program completion rates.

Table 5 provides a trade-by-trade breakdown of the anticipated certification requirements to meet the construction industry's share of employment and replacement demand over the scenario period and the likely targeted number of new registrants required. Based on projected new registrations, several trades are at risk of undersupplying the number of new journeypersons required by 2030. Trades within this group include Bricklayer, Carpenter, Heavy-Duty Equipment Technician, Industrial Electrician, Industrial Mechanic (Millwright), Mobile Crane Operator, Roofer, Steamfitter/Pipefitter, and Welder. Supply risk may be increased over the near term depending on the severity of decline in new registrants caused by the impact of COVID-19. It is important to note that since it is difficult to determine in what sectors apprentices may work after completing their program, the analysis compares the projected supply of new journeypersons and certification requirements across all industries. It does not account for existing imbalances at the 2020 starting point.

**Table 4: Estimated construction certification demand and projected target of new entrants at 44% assumed rate of program completion, Nova Scotia, 2021 to 2030**

|   | 2021 | 2022 | 2023 | 2024 | 2025 | Total 2021–2025 | Total 2026–2030 |
|---|------|------|------|------|------|-----------------|-----------------|
| Total certification demand – all industries | 886  | 862  | 774  | 455  | 461  | 3,438           | 1,683           |
| Total certification demand – construction   | 594  | 573  | 489  | 290  | 290  | 2,236           | 1,021           |
| Construction certification share (%)        | 70%  | 67%  | 55%  | 54%  | 63%  | 64%             | 64%             |
| Target new registrants – construction       | 974  | 817  | 513  | 382  | 802  | 3,488           | 4,182           |

Source: BuildForce Canada

**Table 5: Estimated construction certification demand and projected target of new entrants by trade, Nova Scotia, 2021 to 2030**

| Trade                            | Total certification demand – construction | Target new registrants – construction | Apprentice certification supply risk – all industries |
|----------------------------------|---|---------------------------------------|---|
| Boilermaker                      | 10  | 67                                    | Ample supply  |
| Bricklayer                       | 113                                       | 230                                   | At-risk supply  |
| Carpenter                        | 1,310                                     | 3,716                                 | At-risk supply  |
| Construction Electrician         | 444                                       | 622                                   | Ample supply  |
| Gasfitter                        | 3   | 38                                    | Balanced supply                                       |
| Heavy-Duty Equipment Technician  | 49  | 54                                    | At-risk supply  |
| Industrial Electrician           | 331                                       | 633                                   | At-risk supply  |
| Industrial Mechanic (Millwright) | 37  | 46                                    | At-risk supply  |
| Metal Fabricator (Fitter)        | 12  | 17                                    | Ample supply  |

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**Table 5: Estimated construction certification demand and projected target of new entrants by trade, Nova Scotia, 2021 to 2030 (continued)**

| Trade                                       | Total certification demand – construction | Target new registrants – construction | Apprentice certification supply risk – all industries |
|---|---|---------------------------------------|---|
| Mobile Crane Operator                       | 121                                       | 509                                   | At-risk supply  |
| Plumber                                     | 309                                       | 619                                   | Balanced supply                                       |
| Powerline Technician                        | 17  | 27                                    | Ample supply  |
| Refrigeration and Air Conditioning Mechanic | 113                                       | 107                                   | Ample supply  |
| Roofer                                      | 100                                       | 489                                   | At-risk supply  |
| Sheet Metal Worker                          | 72  | 86                                    | Ample supply  |
| Sprinkler System Installer                  | 15  | 27                                    | Ample supply  |
| Steamfitter/Pipefitter                      | 125                                       | 275                                   | At-risk supply  |
| Welder                                      | 77  | 105                                   | At-risk supply  |
| <b>Total</b>                                | <b>3,257</b>                              | <b>7,670</b>                          |   |

Source: BuildForce Canada

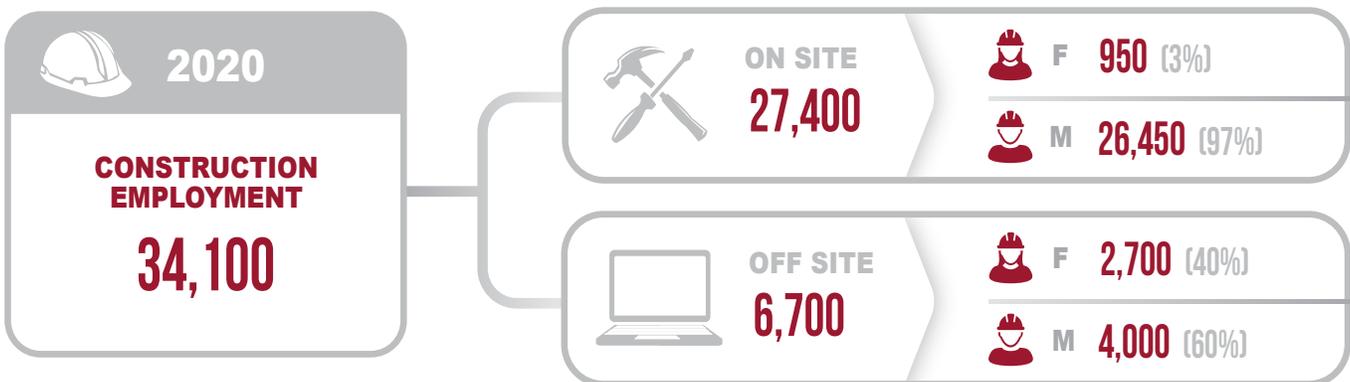
### UNDERREPRESENTED GROUPS OF WORKERS

Building a sustainable and diverse workforce will require the construction and maintenance industry to increase recruitment from groups traditionally underrepresented in the current construction labour force, including women, Indigenous people, and new Canadians.

In 2020, there were approximately 3,650 women employed in Nova Scotia’s construction industry, of which 26% worked on site, directly on construction projects, while the remaining 74% worked off site, primarily in administrative and management-related occupations. Of the 27,400 tradespeople employed in the industry, women made up only 3% (see Figure 8).

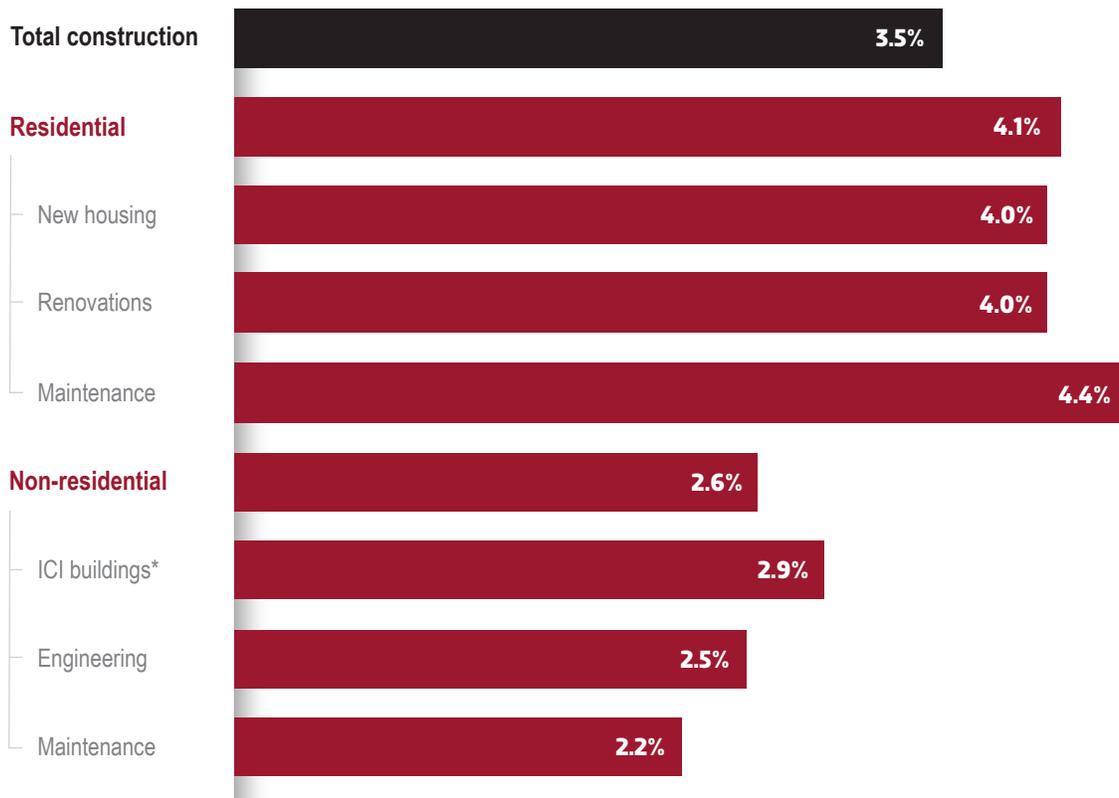
The estimated 950 tradeswomen in Nova Scotia are represented across all sectors of construction, but they tend to be employed in occupations highly demanded by residential and ICI building construction, as nine in 10 tradeswomen are employed in these sectors, with the residential sector alone accounting for the employment of 79% of all tradeswomen in the province. Across sectors, the representation of women is highest in the residential sector, with women accounting for 4.3% of total tradespeople involved in new homebuilding, renovations, and maintenance (see Figure 9). The top five and occupations trades in which women tend to be employed are painters (24% of all tradeswomen), carpenters (22%), plasterers/drywall installers (16%), trades helpers and labourers (13%), and contractors and supervisors (5%).

**Figure 8: Detailed construction employment by gender, Nova Scotia, 2020**



Source: BuildForce Canada calculations based on Statistics Canada’s Labour Force Survey (LFS) and 2016 Census of the Population.

Figure 9: Women's share of total direct trades and occupations (on site), Nova Scotia



\* industrial, commercial, institutional

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and the 2016 Census of the Population.

The Indigenous population is another underrepresented group that presents recruitment opportunities for Nova Scotia's construction industry. In 2020, Indigenous people accounted for approximately 5% of Atlantic Canada's total working-age population.<sup>5</sup> The Indigenous population is the fastest growing in Canada and has a higher propensity to choose the construction industry as a career choice. Based on the 2016 Census, an estimated 7.6% of non-Indigenous

Canadians were employed in the construction industry, compared to 9.6% for the Indigenous population.

Approximately 5% of the province's construction labour force is made up of Indigenous people, of which about 81% work directly on construction projects, while the remaining 19% work primarily in administrative and management-related occupations. While the

<sup>5</sup> Statistics Canada. Table 14-10-0364-01 Labour force characteristics by province, region, and Aboriginal group (x 1,000)

10-YEAR AVERAGE

0.6%



POPULATION GROWTH

8,700



BIRTHS

10,700



DEATHS

8,000



NET IN-MIGRATION

BY 2030

42



AVERAGE AGE OF CONSTRUCTION WORKFORCE

28%



PERCENT OF CURRENT LABOUR FORCE LOST TO RETIREMENT

share of Indigenous people working in the construction labour force is mostly in line with their overall share of the broader labour force, given the predisposition of Indigenous workers to consider careers in construction, there may be scope to further increase the recruitment of Indigenous people into the industry.

Nova Scotia's construction industry may also leverage new Canadians (immigrants) over the coming decade to meet labour requirements. The province is expected to welcome a net of 80,060 new international migrants between 2021 and 2030, making the immigrant population a key source of labour force growth.

Approximately 3.5% of Nova Scotia's construction labour force is made up of new Canadians.<sup>6</sup> Historically, key sources of immigrants to the province were from Europe and the Americas (primarily the United States), whose citizens tend to have a higher propensity to choose the construction industry. While immigrants from these source countries still account for 31% of recent immigrants, a shift is underway, whereby most new immigrants (60%) are from Asia (primarily China, India, the Philippines, and Syria), whose citizens may have a lower tendency to consider employment in the construction sector. Due to Canadian immigration policies and selection criteria, persuading individuals upon arrival to consider careers in the trades may be challenging, particularly for those with professional training outside the skilled trades that are seeking employment in other sectors of the economy. As immigrants will make up an increasing share of the overall Canadian population over the next few decades, additional recruitment efforts will be required to ensure the construction industry continues to recruit its share of new Canadians into the labour force.

<sup>6</sup> Statistics Canada, BuildForce Canada (2021-2030)

## CONCLUSIONS AND IMPLICATIONS

The 2021–2030 *Construction and Maintenance Looking Forward* scenario for Nova Scotia shows a period of growth, as several health care, roadwork, and other infrastructure projects translate into increased non-residential job opportunities and tight labour market conditions as projects rise to an expected peak in 2023.

Replacing the expected retirement of 8,670 workers, or 28% of the current labour force, will continue to present industry with human resource planning challenges. The province's older population demographics make recruiting young workers more challenging, requiring industry to place greater emphasis on mobility, in-migration, and international immigration as key sources of labour supply across the scenario period.

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 anticipated labour market conditions reflect current industry expectations of economic growth and the timing of major projects. Any changes to these assumptions present risks and potentially alter anticipated market conditions.

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