



# Meeting Construction and Maintenance Workforce Challenges

National Industry Strategy

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## Contents

1. Introduction .....	3
2. The Big Picture.....	3
2.1 Canada’s construction and maintenance industry .....	3
2.2 Major construction projects .....	4
2.3 Non-residential building.....	6
2.4 Residential construction .....	7
2.5 New construction, maintenance and sustaining capital .....	8
2.6 Unique industry features .....	11
3. The Construction Labour Market .....	12
3.1 Construction investment and employment .....	12
4. Apprenticeship .....	18
5. Strategies .....	18
5.1 Recruitment .....	19
5.2 Training.....	21
5.3 Retention .....	23
5.4 Mobility .....	24
5.5 Productivity .....	25
5.6 Stakeholder engagement .....	26
6. Conclusion .....	27
Appendix – Strategy Summary .....	28

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# 1. Introduction

BuildForce Canada's<sup>1</sup> National Construction Owners' Forum<sup>2</sup> invited industry and government to its first National Strategy Summit, engaging owners, contractors, labour and government in meeting Canada's construction and maintenance workforce challenges. This was an opportunity for industry leaders to develop a national workforce development strategy.

The construction and maintenance industry is undergoing the most dramatic demographic shift in its history. Close to one quarter of Canada's construction and maintenance workforce is retiring over the next decade, at a time when the industry is projected to continue steady, but moderate growth. This creates workforce challenges that require a national strategy, encompassing the right policies, programs and initiatives. The goal is to ensure the industry has a sustainable skilled workforce with the ability and flexibility to meet changing demands now and into the future.

Working together will ensure Canada's construction and maintenance industry is well positioned to continue driving job and economic growth across the country.

The strategy will be a dynamic document, updated on an annual basis to remain current with the labour market conditions as presented in BuildForce Canada's annual construction and maintenance outlook scenario. This document references the 2016–2025 preliminary *Construction and Maintenance Looking Forward* outlook scenario.

## 2. The Big Picture

### 2.1 Canada's construction and maintenance industry

The construction and maintenance industry represents one of the most important economic forces in the developed world today. In Canada, construction and maintenance workers built, installed, maintained, repaired and renovated infrastructure estimated at \$250 billion annually over the last decade. This infrastructure ranges from large industrial facilities, bridges and roadwork, commercial and institutional buildings to single-detached homes.

In 2014, the industry directly employed 1.4 million workers, accounting for about 7.7 percent of total Canadian employment. Looked at another way, one out of every 13 workers is directly involved in construction and maintenance. Construction represents 7 percent of gross domestic product (GDP) and when taking into account indirect effects, the GDP share would almost double to 12.5 percent, making it one of Canada's largest industries.

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<sup>1</sup> BuildForce Canada is a not for profit, industry-led organization committed to providing accurate and timely information and resources to advance the needs of the entire construction and maintenance industry.

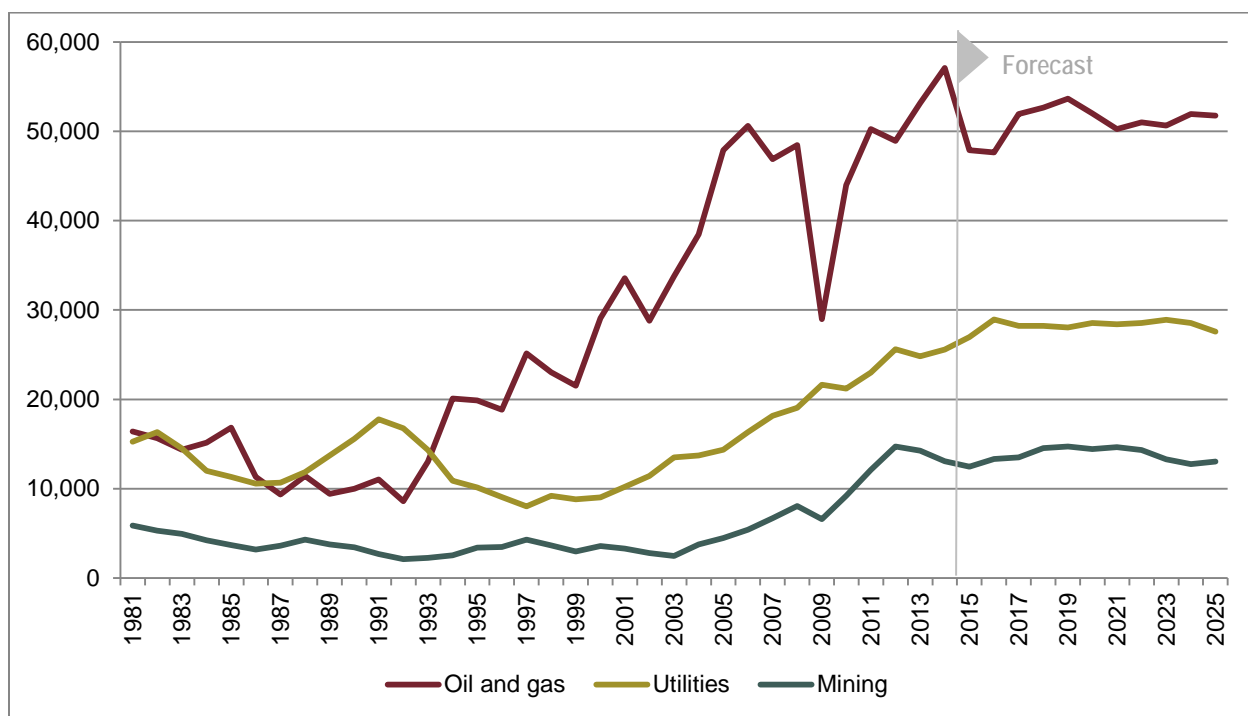
<sup>2</sup> The National Owners Forum is an open forum where owners can come together at a national level to discuss labour market issues of mutual interest.

## 2.2 Major construction projects

Central to assessing labour market dynamics is tracking major industrial and engineering projects. Investment in major construction projects in certain regions of the country has had a tremendous impact on Canada's provincial, regional and national economies and labour markets. After more than a decade-long construction expansion driven by new resource developments, the composition of projects is changing. Major infrastructure projects, sustaining capital and maintenance work, electrical generation and distribution, pipelines and transportation systems, which are required to support Canada's new resource capacity have become important drivers in labour market demands.

Figure 1 shows investment trends for oil and gas, mining and utilities development projects. Between 1981 and 2000, total investment (including machinery and equipment) averaged \$32 billion. The first wave of major developments started in the early 2000s, with investment more than doubling to \$75 billion by 2008. A key driver over this period was increased oil sands investment, but activity was picking up in mining and utilities work across the country. Following a brief decline in 2009, investment continued to grow and was estimated at \$91 billion in 2014. Investment was down in 2015 to \$87 billion as the decline in the price of oil translated into announced project delays and cancellations. Between 2016 and 2025 more moderate growth is projected, averaging \$93 billion (including machinery and equipment) annually across the remainder of the period to 2025, or close to \$950 billion dollars of activity over the next decade.<sup>3</sup>

**Figure 1: Selected resource-based investment expenditures, including construction, machinery and equipment (\$2007 millions\*)**



\* \$2007 millions indicates that the investment values are in year 2007 dollars (base year), that is, adjusted for inflation. This is used to calculate the real physical year-to-year change of the value of construction, factoring out growth (increase value) due to increases in prices.

Source: Statistics Canada and BuildForce Canada

<sup>3</sup> BuildForce Canada, 2016 outlook scenario, *Construction and Maintenance Looking Forward*

Across construction, the largest growth was in the oil and gas sector. Investment (including machinery and equipment) was on a steady upward trend, increasing from \$9 billion in 1992 to \$51 billion in 2006. After a brief decline in 2009, investment began to rise again and continued to increase until the 2014 decline in oil prices. As prices continued to decline, new capital projects were postponed or cancelled and investment declines in 2015 and 2016. Projected sustaining capital and maintenance work continues to grow across the scenario period, partially offsetting declines in new investment. New capital investment is expected to resume more moderate growth over the long term as oil prices increase, but there is uncertainty around the pace and level of growth. In British Columbia, proposed new liquefied natural gas (LNG) resource developments add to stronger growth over the medium term.

Investment in utilities across Canada has been on a steady rise since the mid-1990s, increasing from \$8 billion in 1997 to a projected peak of \$29 billion in 2016. Investment is then sustained near the peak across the remainder of the outlook period to 2025.

Mining investment was relatively unchanged from 1981 to 2004, averaging around \$3.5 billion per year. Investment increased to peak at \$14.7 billion in 2012 and then slowed between 2013 and 2015. A second wave of proposed new projects is scheduled between 2016 and 2019, with investment close to the previous peak, averaging \$14 billion per year. Investment then declines marginally across the remainder of the outlook period, but stays well above historical levels, averaging \$13 billion per year to 2025.

Key major projects across Canada contribute to growth:

- **Newfoundland and Labrador:** Major offshore platforms, a nickel smelter, and hydroelectric and transmission projects are peaking and winding down. A second wave of investment (offshore and mining) is anticipated over the long run.
- **New Brunswick:** Proposed pipeline, marine terminal, pulp and paper modernization, hydro dam replacement and mine developments are expected to add to construction investment across the outlook period. Non-residential construction cycles up over the medium term starting in 2017, expected to peak in 2019 and then decline as major projects wind down.
- **Quebec:** Proposed pipeline, mining, bridge, wind power and hydroelectric generation and transmission line projects add new jobs over the medium term.
- **Ontario:** Proposed nuclear refurbishments, transportation systems and resource development projects add to employment opportunities.
- **Manitoba:** Near-term growth is driven by major power generation and transmission projects. As projects wind down, overall non-residential activity remains well above historical levels.
- **Saskatchewan:** New proposed resource development and pipeline projects are scheduled over the medium term keeping activity well above historical levels of activity.
- **Alberta:** Major oil sands, pipeline, utilities and other infrastructure projects are winding down and overall construction activity slows over the medium term. While new investment declines, maintaining current oil sands production requires a steady flow of sustaining capital and maintenance work, with rising investment and labour demands across the outlook period.
- **British Columbia:** Investment and employment opportunities rise over the medium term driven by proposed major LNG, pipeline, utilities, mining and transportation projects.

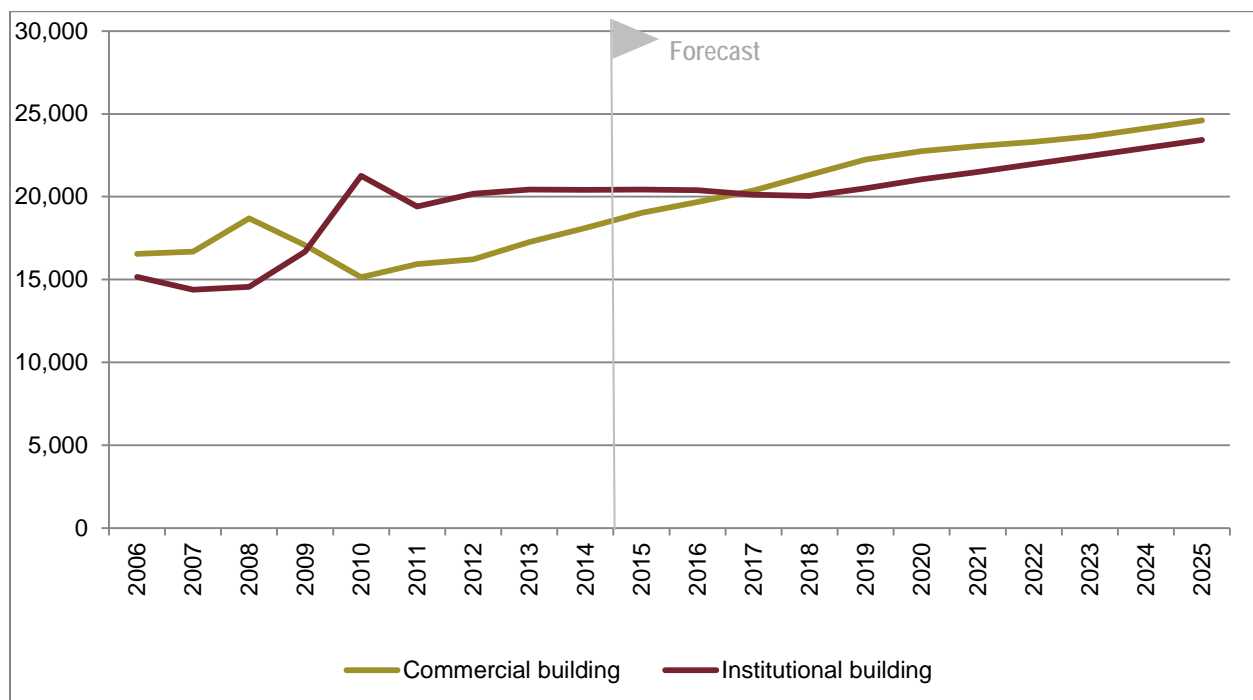
These kinds of regional major projects provide spin-off opportunities for many economic sectors, locally and throughout the country. For example, according to the Canadian Energy Research Institute, investments in Alberta's oil and gas sector impacts GDP in all provinces. The goods, materials and services used to construct, maintain and operate in situ oil sands projects, mines and upgraders come from across Canada. Many of the components, such as tires, trucks, gauges, valves and pumps, are produced in the industrial regions of Eastern Canada. As well, the mining, utilities and nuclear industries has had considerable impact on many regional economies, in areas such as the construction of nuclear reactors, electricity generation, the export of reactors and the mining and export of uranium.

Spin-off effects also extend to other construction markets such as residential, commercial and institutional buildings, driven by population growth and changes in the demand for consumer and business services.

## 2.3 Non-residential building

As Canada's immigrant population and related residential activity grow, they drive a steady stream of commercial and institutional building demands. Commercial construction is a steady source of new construction jobs across all provinces (see Figure 2). Demand for institutional building slows over the near term to 2018 and then rises across the remainder of the outlook period.

**Figure 2: Commercial and institutional building investment (\$2007 millions\*)**



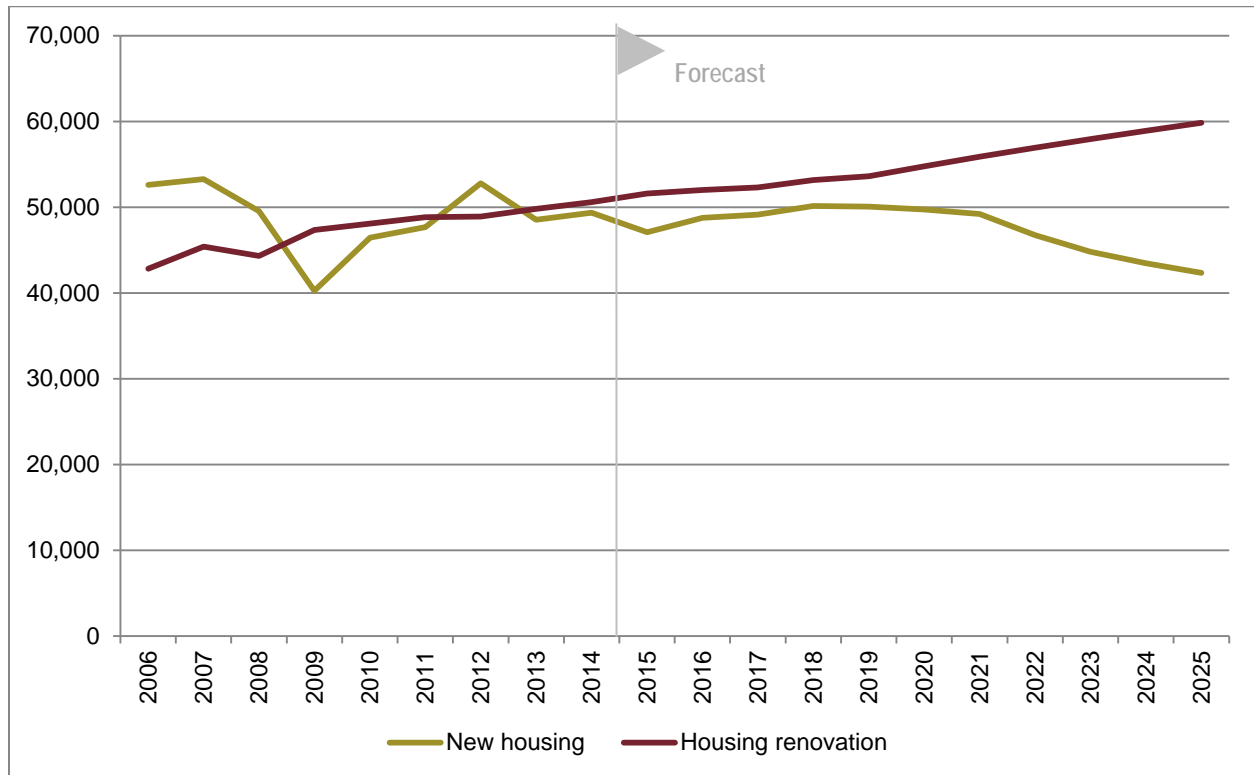
\* \$2007 millions indicates that the investment values are in year 2007 dollars (base year), that is, adjusted for inflation. This is used to calculate the real physical year-to-year change of the value of construction, factoring out growth (increase value) due to increases in prices.

Source: Statistics Canada and BuildForce Canada

## 2.4 Residential construction

Following a decline in 2015, lower population growth and an aging workforce will keep housing starts and new investment in the historical average range over the medium term to 2021. As starts and new housing investment slow later in the period, renovation work is projected to continue to rise, with more than half of the investment in residential construction dedicated to renovation and maintenance work. Renovation investment will be driven steadily higher as the housing stock ages (see Figure 3).

**Figure 3: New housing and renovations investment (\$2007 millions\*)**



\* \$2007 millions indicates that the investment values are in year 2007 dollars (base year), that is, adjusted for inflation. This is used to calculate the real physical year-to-year change of the value of construction, factoring out growth (increase value) due to increases in prices.

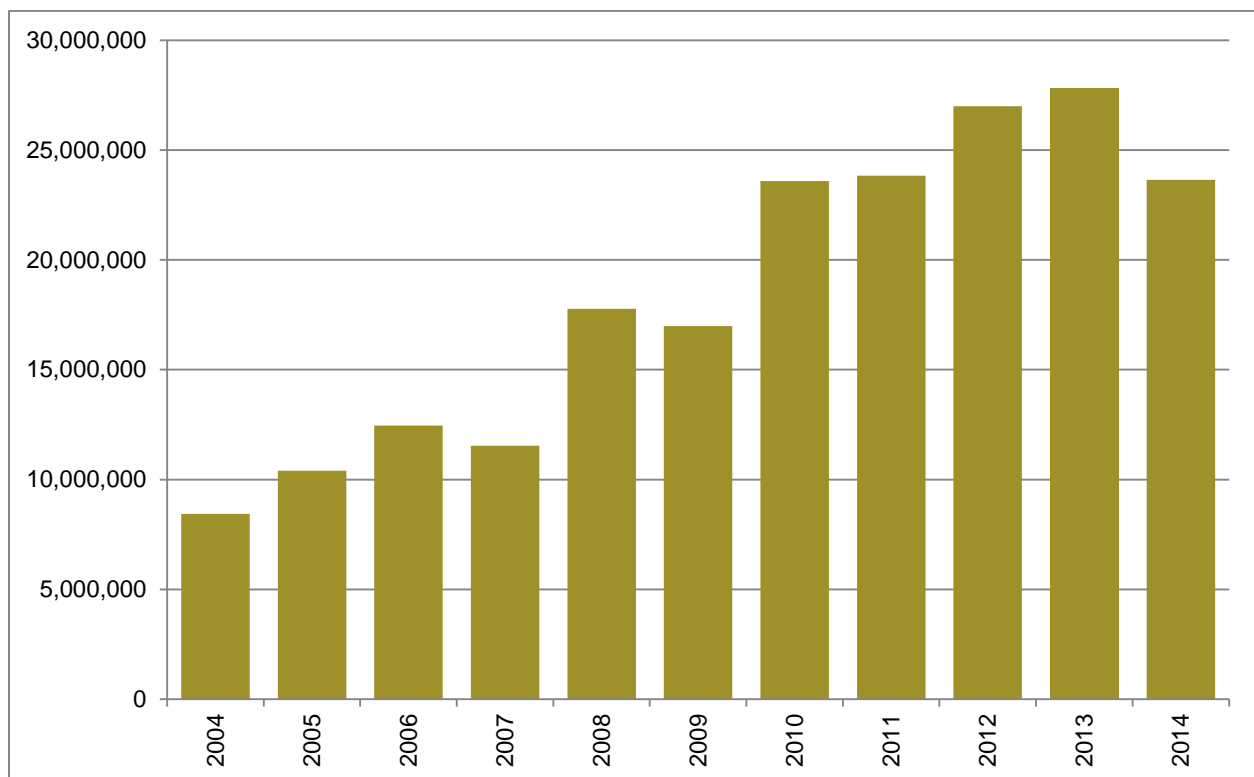
Source: Statistics Canada and BuildForce Canada

## 2.5 New construction, maintenance and sustaining capital

It is important to understand the impacts of new construction, sustaining capital<sup>4</sup> projects, maintenance<sup>5</sup> and shutdowns because the labour required for these types of activities is becoming a significant challenge as more and more facilities are constructed. New construction competes with sustaining capital expansion as well as operations and maintenance requirements (i.e., shutdowns). Increasingly, workforce development for the skilled trades will need to focus on the skills required for ongoing maintenance and sustaining capital infrastructure.

One measure of the growth in maintenance work can be illustrated by tracking man-hours reported by the General Presidents' Maintenance Committee for Canada/National Maintenance Council for Canada. Figure 4 shows that since 2004, Western Canadian industrial maintenance man-hours increased from just over 8 million to peak at 27 million hours in 2013, driven primarily by oil sands requirements in Alberta. Looking forward, maintenance activity across all markets will continue to trend up over the outlook period with continued investment in oil and gas, utilities and mining projects.

**Figure 4: Industrial maintenance man-hours, Western Canada**



Source: General Presidents' Maintenance Committee for Canada and National Maintenance Council for Canada

<sup>4</sup> Sustaining capital refers to the periodic addition (or replacement) of capital, which is required to maintain operations at existing levels.

<sup>5</sup> Maintenance refers to the entire process of maintaining equipment and comprises two areas for most organizations:

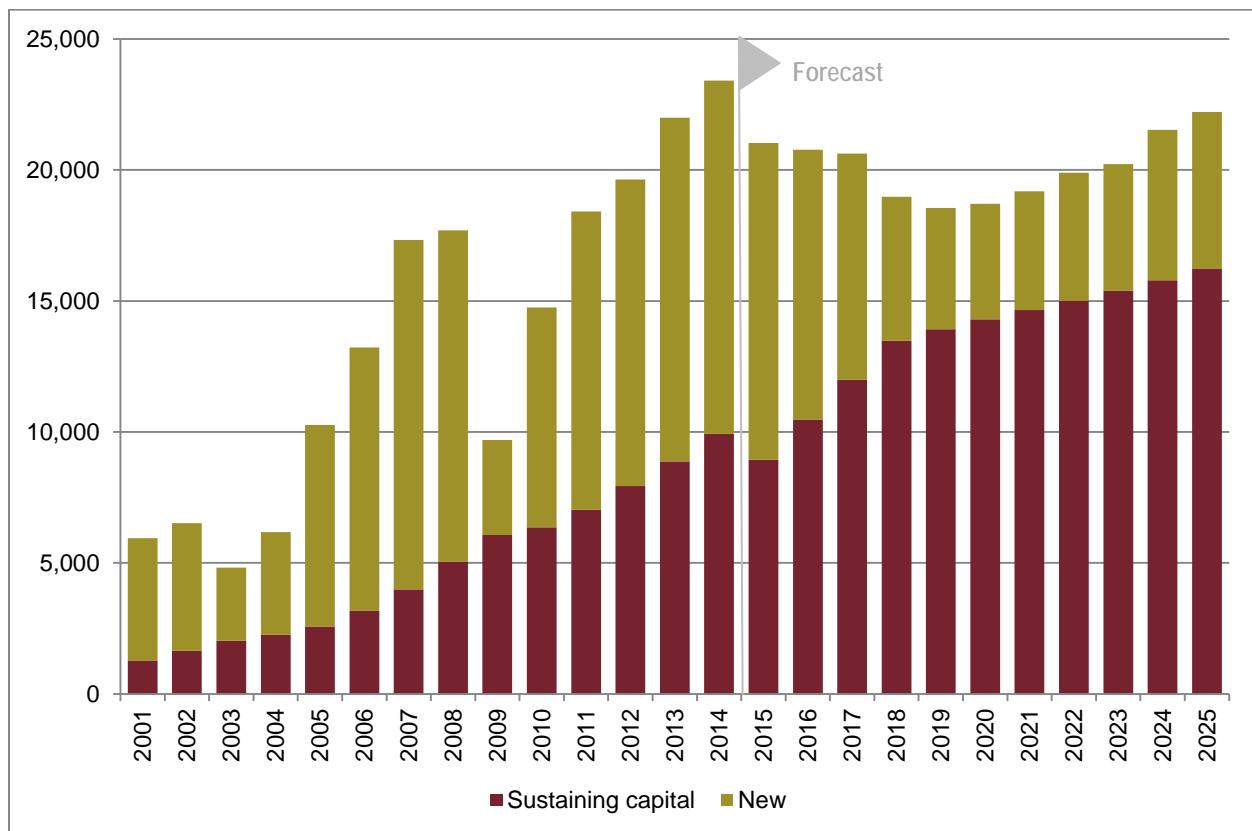
- 1) Routine or on-stream work that does not require operations/production to shut down an operating unit to maintain the equipment since it is already accessible through easy isolation or spare capabilities.
- 2) Turnarounds, shutdowns and outages are used interchangeably and refer to situations in which the operating unit is taken out of production to maintain equipment and can only be done when the unit is down or cannot be easily isolated from the operating unit. Stoppage size can affect part of a unit or an entire site depending on the business.



Figure 5 illustrates that over time, the proportion of oil sands capital investment attributed to new construction declines while sustaining capital increases. Between 2001 and 2014, oil and gas investment accounted for almost \$200 billion (including machinery and equipment). With the exception of a brief downturn in 2009, both new and sustaining capital was riding a 15-year resource expansion to 2014. Investment slowed in 2015 as the fall in oil prices translated into new capital project spending delays and cancellations. New capital investments resume over the long term as oil prices recover, while sustaining capital and maintenance work rises steadily across the 2016–2025 outlook period.

The importance of sustaining capital is reflected in the rising share of total oil sands investment. In the early 2000s, the sustaining capital share of the total was estimated at 25 percent, rising to around 40 percent by 2014 and increasing to average 70 percent across the outlook period.

**Figure 5: Oil sands capital investment**

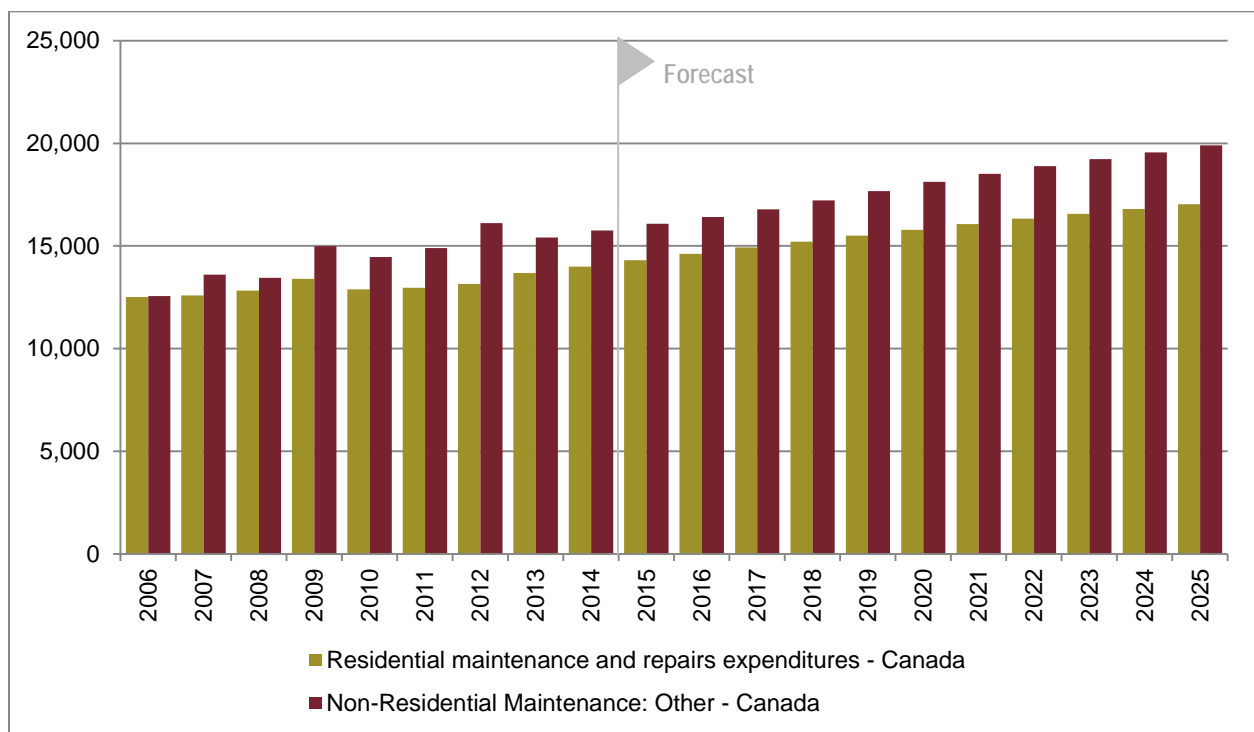


Source: Statistics Canada and BuildForce Canada

Maintaining current production requires a steady flow of sustaining capital and maintenance investment that employs a rising proportion of the available construction workforce. Similar trends are emerging in Saskatchewan with the expansion of resource development projects over the last several years and expected in British Columbia as new LNG facilities come on stream. In Ontario, proposed major nuclear refurbishment projects will add to labour demands across the outlook period.

Maintenance and repair investment also grows steadily in the residential sector and non-residential sector (commercial, institutional, road, highway, bridges). Figure 6 shows residential maintenance investment growing to \$17 billion across the outlook period to 2025, up 20 percent compared to 2015. Non-residential (commercial, institutional, roads, highways, bridges, etc.) increases to \$20 billion over the same period, up 23 percent.

**Figure 6: Residential maintenance and repairs and non-residential maintenance: other (commercial, institutional, roads, highways, bridges, etc.) investment, \$2007 millions\***



\* \$2007 millions indicates that the investment values are in year 2007 dollars (base year), that is, adjusted for inflation. This is used to calculate the real physical year-to-year change of the value of construction, factoring out growth (increase value) due to increases in prices.

Source: Statistics Canada and BuildForce Canada

## 2.6 Unique industry features

Provincial data sources suggest that roughly one-third of construction workers are employed by more than one employer in a given year. In addition, workers who do not change employers may be employed outside the region or even the province in which they live. The yearly turnover rate of the industry may be close to 15 percent, considerably increasing the hiring requirements of construction firms.

The industry is predominantly comprised of small companies employing less than five people. If the construction industry was dominated by a few firms, those wishing to work would only have to contact these firms. The industry is very fragmented, however, and a typical firm will hire an average of four workers when we count only the months that the contractor is doing construction work. This considerably reduces the likelihood that unemployed workers will know which contractor is hiring or which skills upgrading course would enable them to work more in the future.

To add to the difficulties, the construction industry's level of activity relates to investment, the most volatile component of GDP. During an economic downturn, industry activity may be halved and then double again over the next growth period. At the same time, employment opportunities may decline in a downturn, even for the experienced workforce. New apprentices entering the labour market during those years may be faced with limited work leading to delayed achievement of journeyman status and potential exit from the industry. Apprentice registration and vocational school enrolment eventually declines and the industry suffers lasting damage to its reputation.

For any employment strategy to succeed, it must take into account the unique features of the industry. The following are some of the key features that characterize the construction industry:

- Construction work is always temporary. Jobs can last anywhere from a few hours to a number of years on the same construction site.
- Measurement of the number of construction “jobs” is difficult because the hours a certain trade works do not always add up to one person's full-time annual employment. For example, a 1,000-hour construction job could be half a year's work for one person or a week's work for 25 workers. A construction project may require 20 workers for one year, but a particular trade may be needed for only one week.
- No matter the size or duration of construction work, workers are vulnerable to the boom-and-bust cycles of the local economy. Seasonal and other fluctuations in construction activity (demand) translate into a situation where there may be severe labour/skills challenges in one region of Canada and surpluses elsewhere.
- Apprentices train while working and it can take up to five years of steady work for an apprentice to achieve journeyman status. Three or four years of strong economic growth drains the pool of experienced workers and the skills of first- or second-year apprentices often will not be sufficient to meet the skills required on a job. Calls for more apprentices result in increased apprentice registrations and higher enrolment at vocational schools, but since training still takes as much as five years, the shortage of skilled workers remains. This situation persists until the next downturn.

These industry characteristics lead to inefficient management of the construction workforce. Industry leaders across Canada are aware of these issues and are asking questions such as:

- How many workers are entering the industry?
- Where do they come from?
- Which provinces are they working in?
- Which occupations are they filling?
- What strategies/processes are used to bring these workers into the industry?

These unique features also make the industry a challenging environment for government policy and program intervention.

Another key feature of the construction industry is the relationship between owners, contractors/employers and workers. In other industries, this relationship is based on a long-term scenario in which employers hire to compensate for turnover that may be in the order of 2 percent per year and adjust their workforce to demand that is typically related to the business cycle. In the construction industry, contractors/employers are continuously hiring, even during an economic downturn. This stems from the temporary, seasonal and cyclical nature of construction activity.

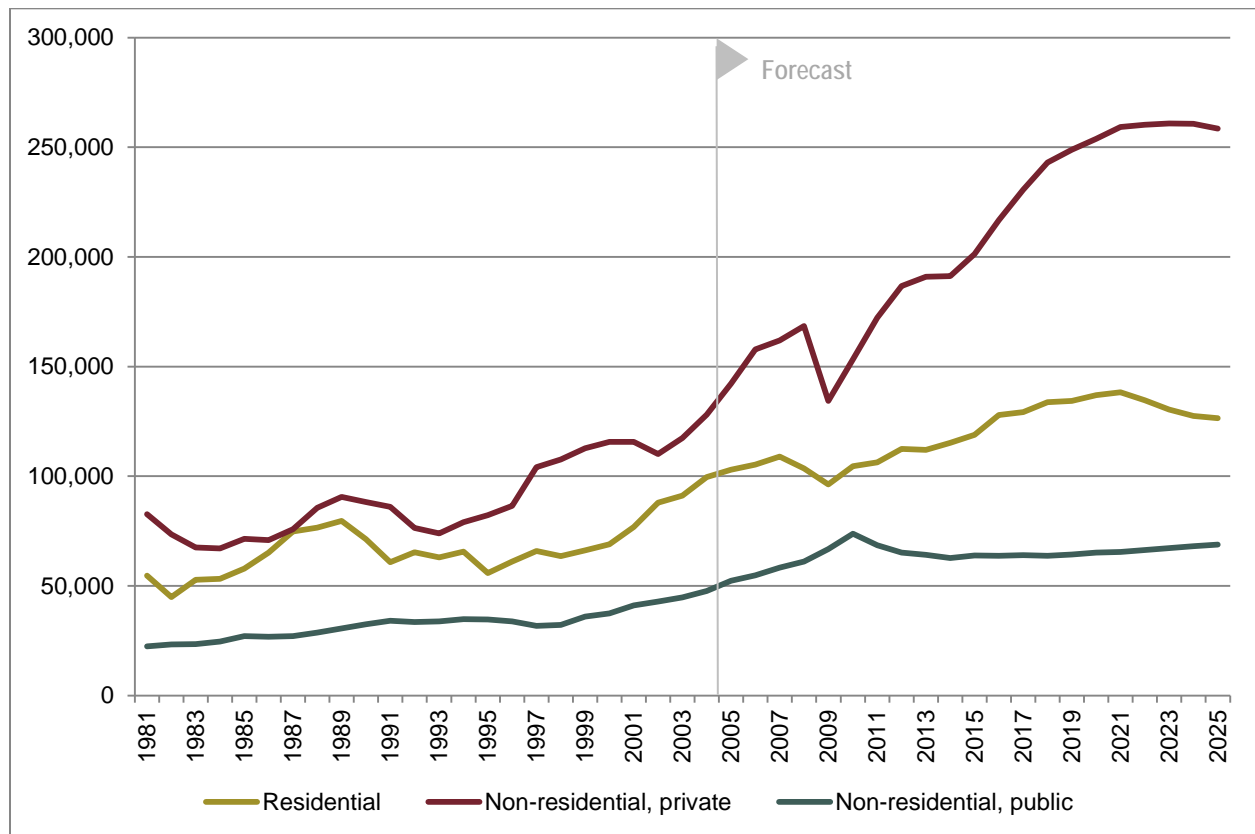
The role of owners varies according to the type and nature of the project (i.e., new construction, sustaining/replacement capital, maintenance/shutdowns). While some owners directly employ their own tradespeople to undertake sustaining capital and maintenance work, a significant number of other owners will use contractors/sub-contractors to meet their needs. In the case of capital projects, owners generally do not hire workers directly; instead, they work through contractors who in turn deal directly with the workforce. The owners' interest, however, is in protecting their investment by ensuring that skilled workers are available to meet demand. Although they are not directly involved in the employment relationship, owners do influence hiring by putting attraction and retention standards in place. An example is to contractually require contractors to hire and retain apprentices to increase the pace of skills acquisition for apprentices and decrease the time needed to reach journeyman status, thereby making the industry more attractive to new entrants.

## 3. The Construction Labour Market

### 3.1 Construction investment and employment

The demand for skilled tradespeople is derived from the demand for construction and maintenance services. The latter, in turn, is derived from the decisions of households, business owners and government regarding expected future physical capital requirements and the need to maintain existing physical capital. As a result, the outlook for the entire economy drives the outlook for skilled tradespeople and determines requirements for future capital and the maintenance of existing capital. The overall economic outlook also determines the supply of construction and maintenance workers.

With little growth in investment from the early 1980s to the mid-1990s, the Canadian construction industry experienced an 85 percent increase in the amount of expenditures between 1996 and 2008 (see Figure 7). This increase was fueled by the need for additional housing to accommodate population growth, business expansion and replacement of existing facilities to meet current and future demand, and the need to sustain and expand the public infrastructure. As shown in Figure 7, all three categories of investment expenditure experienced rapid growth to 2008. Residential and private non-residential investment declined briefly in 2009 and then resumed growth. Public non-residential investment continued growth to 2010 driven by the infrastructure stimulus program and declined in 2011 as the stimulus program ended. Public investment then remains relatively unchanged across the remainder of the outlook period. The latest BuildForce forecast suggests that total construction expenditures will continue to increase across the 2016–2025 outlook period, but at a slower pace than in the past 15 years.

**Figure 7: Construction expenditures, 1981–2025 (\$2007\*, includes machinery and equipment)**

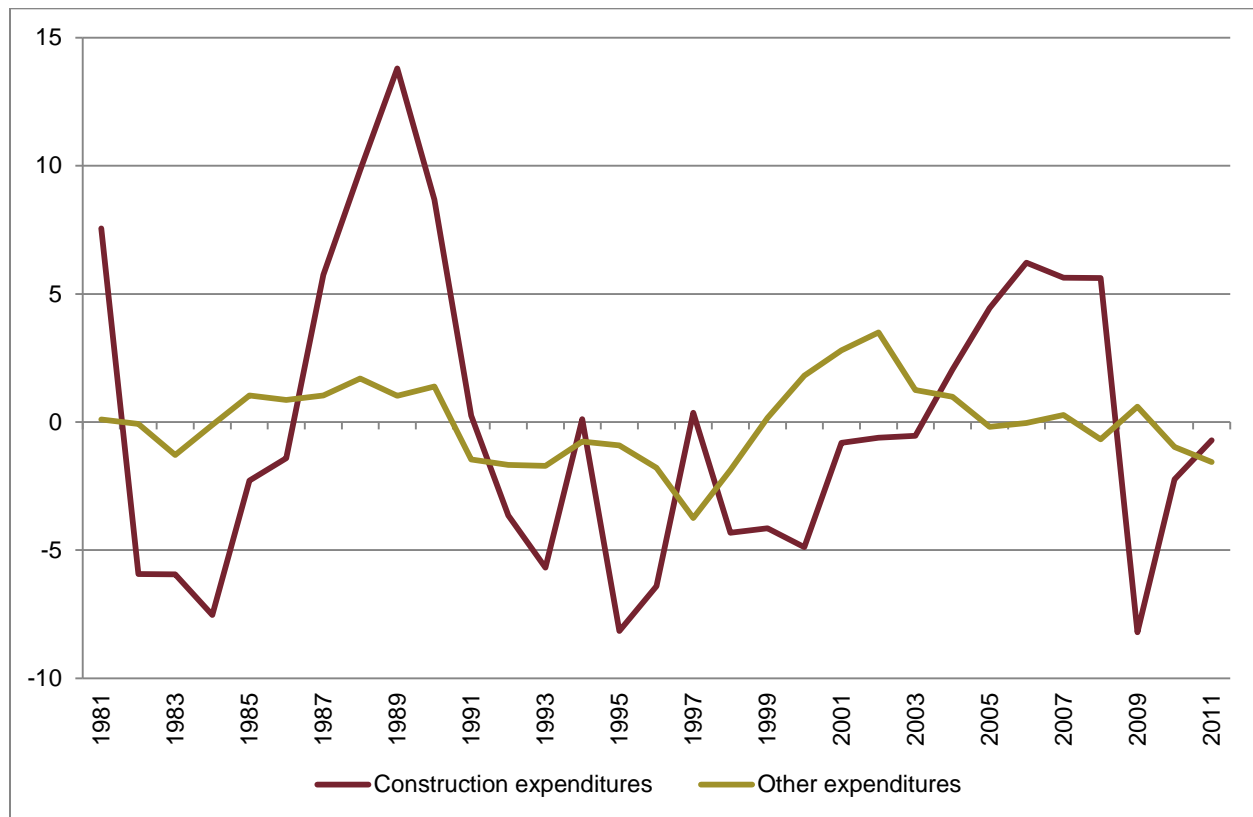
Note: Expenditures include construction, maintenance and sustaining capital expenditures

\* \$2007 indicates that the investment values are in year 2007 dollars (base year), that is, adjusted for inflation. This is used to calculate the real physical year-to-year change of the value of construction, factoring out growth (increase value) due to increases in prices.

Source: Statistics Canada and BuildForce Canada

Investment expenditures experience more volatile cycles than those in other industries. Figure 8 shows the percentage deviation from the trend (i.e., swings in activity) for construction investment and other expenditures in the economy. As evident in Figure 8, the deviation from trend expenditure levels over the economic cycle is much greater for construction expenditures. Similar to seasonal swings, this type of behaviour requires additional workers to meet peak levels in activity, leading to higher average unemployment rates for the industry.

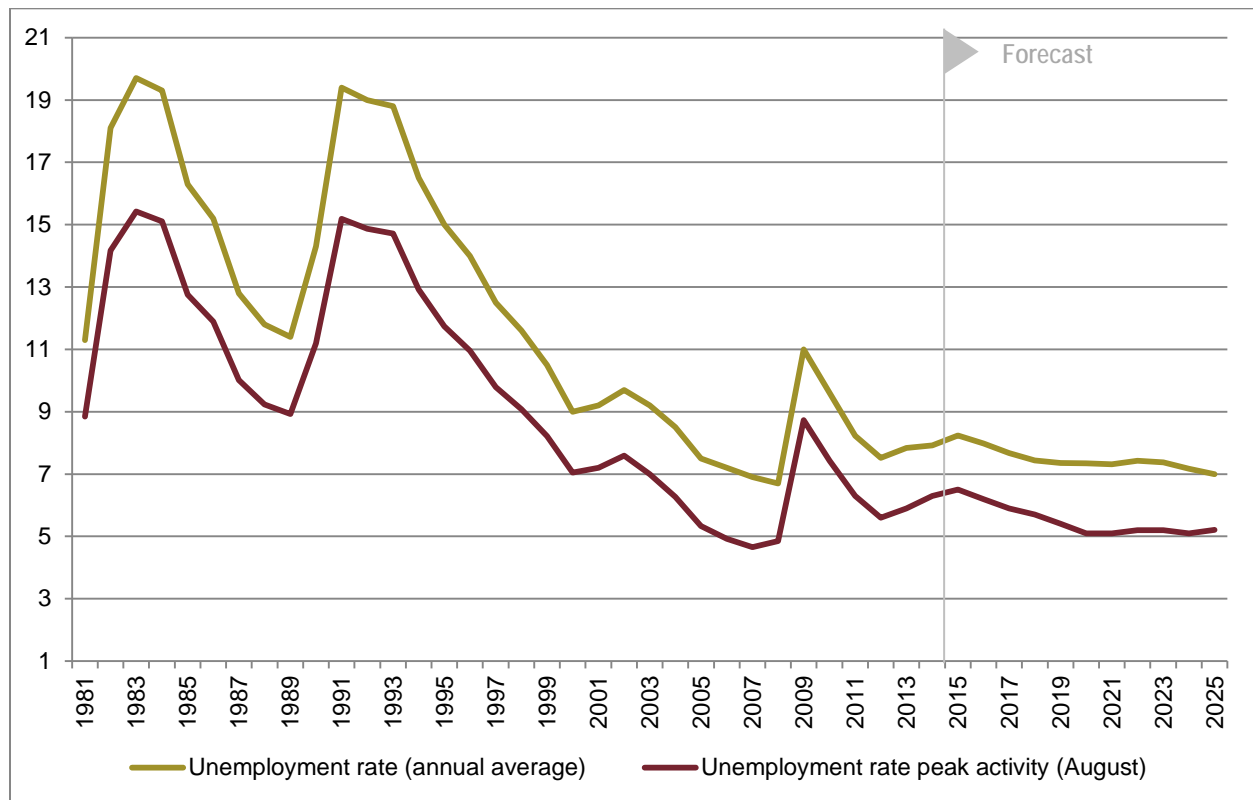
Figure 8: Construction and other expenditures, percentage deviation from trend levels, 1981–2011



Source: Statistics Canada

This increase in construction and maintenance activity has required the industry to find enough qualified workers to meet the large increase in the demand for its services. While employment in the industry has risen about 70 percent since the mid-1990s, the industry's labour market has tightened and unemployment rates have fallen below the lowest levels found in Statistics Canada's Labour Force Survey, which covers the 1981 to 2014 period (see Figure 7). This situation has made it increasingly difficult to find enough workers, particularly those with the required qualifications. The 2009 recession boosted the unemployment rate to 11 percent, adding some labour resources to the market. This is low, considering that historically in previous downturns, the unemployment rate approached 20 percent (see Figure 9). As construction activity resumed growth in 2010, unemployment declined, with rates falling back to 7.5 percent by 2012, but then was up marginally to 7.8 percent in 2013 and 7.9 percent in 2014.

The BuildForce outlook suggests that rising retirements and limited growth in the youth population restrict recruiting options. In particular, demographic changes have steadily reduced unemployment – across construction markets and cycles – so that the unemployment rate will remain below historical averages across the outlook period, trending down to 7 percent over the long run and around 5 percent at peak.

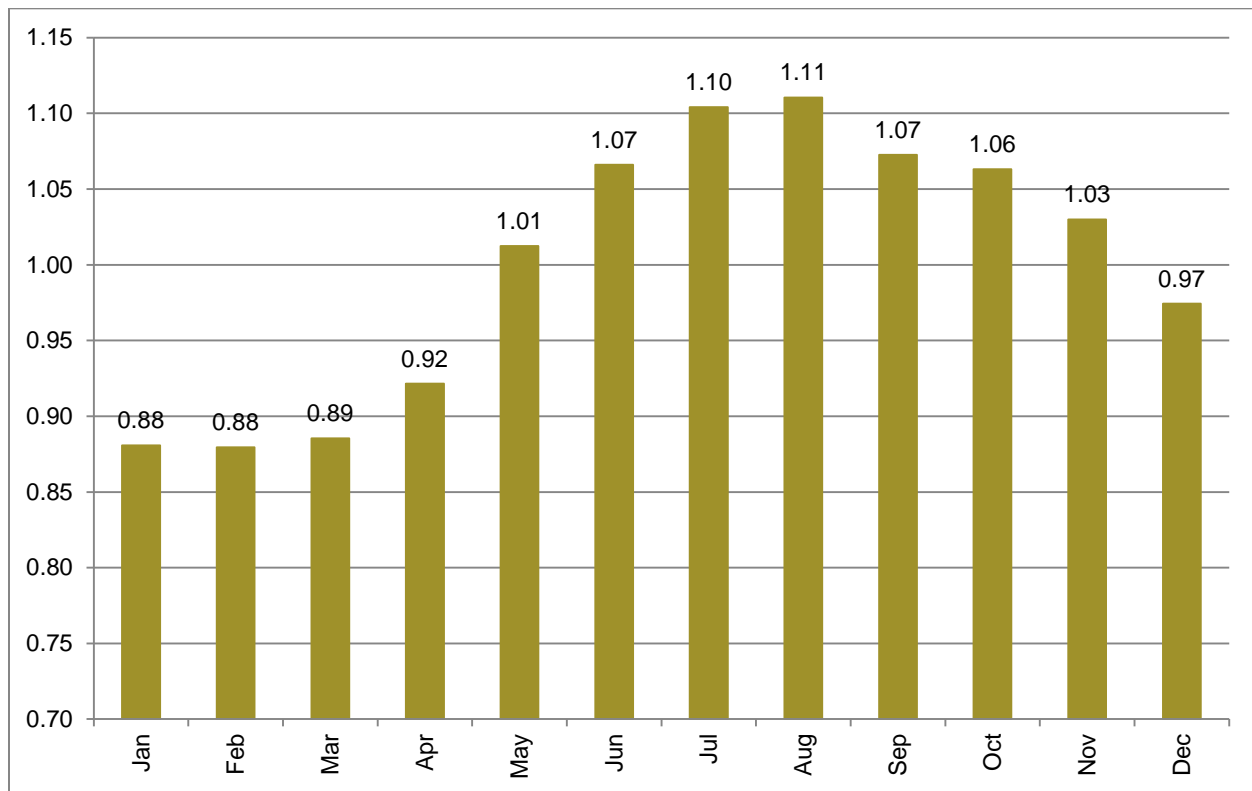
**Figure 9: Unemployment rate**

Source: Statistics Canada and BuildForce Canada

The characteristics of investment behaviour and the seasonal nature of construction activity contribute to peak demand periods for which a larger workforce is required. At the same time, workers face higher average unemployment rates than those in many other industries.

For every plant or structure built, there is a corresponding need for maintenance of that plant or structure. To meet this need, the industry draws on the same pool of skilled labour as it does for new construction. The impact is that as more new construction takes place, more workers are required for maintenance, adding to the market challenges to meet peak demand requirements.

Figure 9 demonstrates the impact of seasonality on the unemployment rate. Specifically, it shows both the annual average unemployment rate and the unemployment rate for August, the month when construction activity typically is at its peak. Since 1976, the annual unemployment rate has averaged 2.5 to 3 percentage points above the rate at the peak level of construction activity. The peak month can be seen in Figure 10, which shows the average seasonal factors for construction employment. These factors indicate the ratio of employment in the month to the rate for the year. For Canada as a whole, employment peaks in August, standing about 11 percent higher than annual average employment and 22 percent above its January level. It should be noted that these figures differ noticeably across the provinces depending on climate and other factors.

**Figure 10: Seasonal factors, construction industry employment, 1976–2014 average**

Source: Statistics Canada

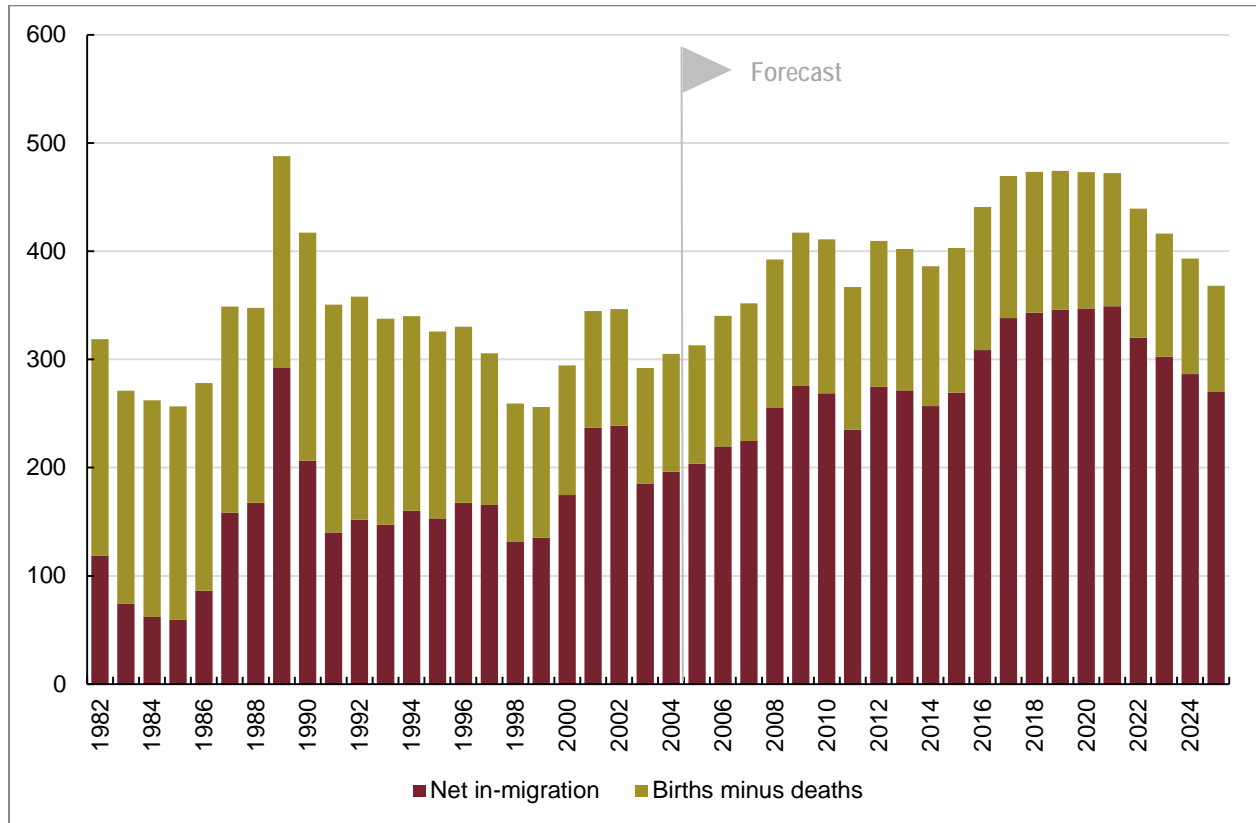
The industry's ability to attract workers is largely determined by the availability of labour in the economy as a whole. If the overall labour force is growing faster than demand (i.e., the unemployment rate is high or rising) then it will be relatively easy to obtain workers. Unfortunately, the aging of the population is slowing labour force growth and making it more difficult to find workers. This is one of the reasons for the sharp drop in the unemployment rate in the construction industry over the past few years. The other main reason is the increase in demand for skilled tradespeople. Nevertheless, construction is not the only industry seeing low unemployment rates. The BuildForce outlook shows that the annual average unemployment rate for Canada's labour force (all industries) trends down to 5.5 percent over the long term.

To a large extent, the recent tightening of Canada's labour markets has resulted from an aging population. Figure 11 shows the contributions of the domestic population – births minus deaths – and net immigration to Canada's population change since 1981. As the figure indicates, domestic contribution to population growth declined noticeably in the 1980s because of falling fertility rates and has remained relatively low ever since. While there has been some increase in fertility rates over the past few years, this is not expected to continue. Low fertility and aging will continue to keep the domestic contribution to population change low.



Low fertility rates and growing employment have also increased Canada’s dependence on immigrants to meet labour force needs. In the early 1980s, net immigration accounted for about 30 percent of population change. In the last 10 years, it has accounted for 65 percent and is expected to reach nearly 75 percent by 2019. It should be noted that even with more immigration, the BuildForce outlook forecasts a tight labour market. Unless the economy can achieve higher productivity, additional immigration will continue to be a major source of labour force growth.

**Figure 11: Components of Canada’s population growth (000s)**

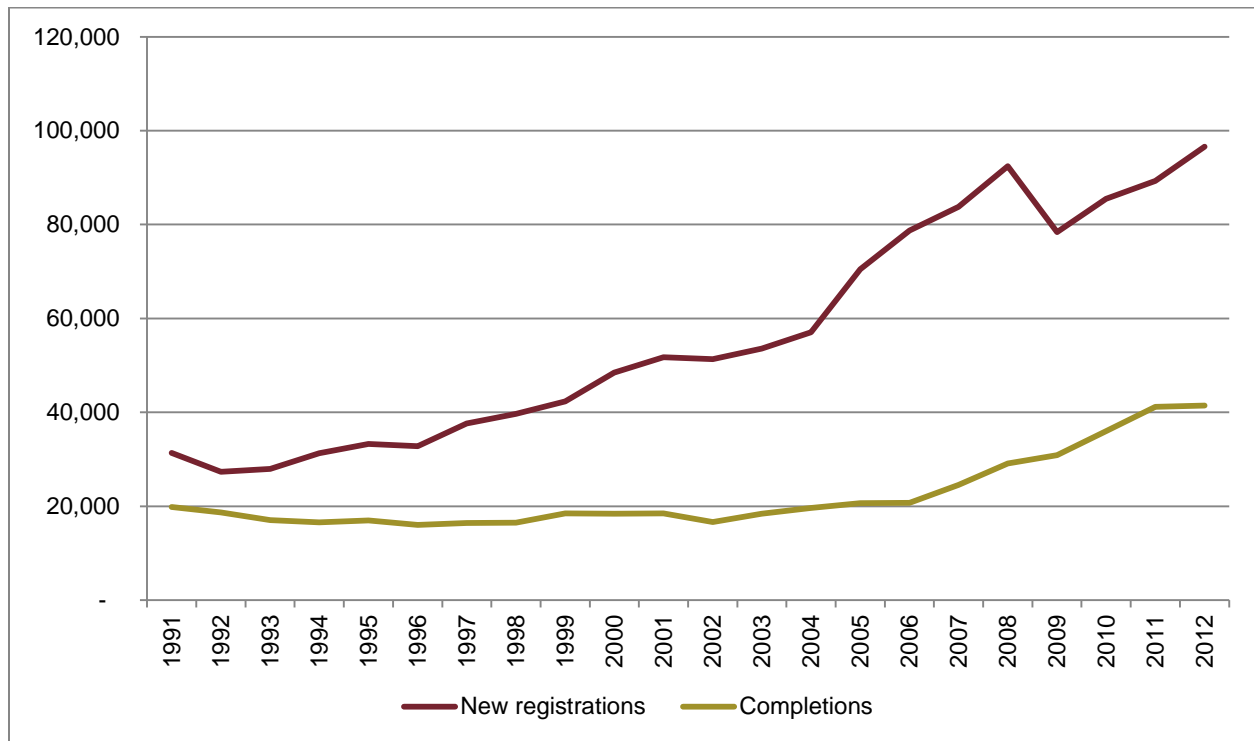


Source: Statistics Canada and BuildForce Canada

## 4. Apprenticeship

Figure 12 shows the annual change in the national totals for new apprenticeship registrations and completions. Tracking the numbers in this way highlights the apparent lag between the two. Registrations declined in 2009 with the economic slowdown, but picked up in 2010 as construction activity increased.

**Figure 12: Apprenticeship in the construction trades, new registrations and completions, 1996–2012**



Source: Statistics Canada

## 5. Strategies

It is clear that industry employs many approaches to maximize existing Canadian labour/skill sources and to access international sources. According to the BuildForce 2016 forecast, consistent growth in the non-residential construction and maintenance industry will result in moderate employment growth. In addition, the industry will need to replace a large number of retiring workers who are expected to retire between 2016 and 2025.

The Summit explored key areas that had been identified as priorities in the earlier National Owners Forum document, *Meeting Construction and Maintenance Workforce Challenges, National Construction Owners Forum White Paper*, revised May 2015. The results of the Summit discussions are documented below according to six strategic priorities.

1. **Recruitment:** Attracting and recruiting the brightest and best from all available sources of labour, including youth, Aboriginal people, women, mature workers, immigrants and temporary foreign workers to replenish the workforce and meet current and future requirements.
2. **Training:** Ensuring Canada's construction industry has the apprenticeship and training capacity to meet demands for skilled workers.
3. **Retention:** Maximizing investment in new tradespeople by ensuring construction work sites are safe, equitable and respectful.
4. **Mobility:** Creating an environment that supports the movement of skilled workers to meet peak demands across Canada.
5. **Productivity:** Defining, measuring, and improving productivity in the construction and maintenance industry.
6. **Stakeholder engagement:** Coalescing industry stakeholders around a common vision and action.

Although all stakeholders have a role to play in addressing these challenges, there is a need to focus on moving forward as quickly as possible and avoiding duplication of effort. This section sets out industry's priorities and strategies to engage industry stakeholders (owners, employers, labour groups, educators and trainers, government and other stakeholders) in discussion and action.

## 5.1 Recruitment

### Youth

The construction and maintenance industry in Canada will be impacted significantly by the aging demographic. BuildForce estimates that the industry will lose approximately 250,000 skilled tradespeople over the next decade due to retirements. The industry will need to attract the brightest and best to replenish the workforce from a shrinking pool of young people. Working from knowledge of the values and interests of youth, industry will need to change perceptions, dispel myths and promote the opportunities, career paths, professionalism and lifestyle associated with careers in the construction industry.

### Aboriginal people

The Aboriginal population is the fastest growing in Canada; nearly 50 percent of which is below the age of 25. This represents a significant pool of largely untapped labour. To maximize this resource, relevant stakeholders (industry, governments, Aboriginal leaders, community leaders, educators and trainers) at the regional level need to understand cultural differences and identify training needs. These activities must include cultural awareness training about the industry for Aboriginal youth and greater awareness of the Aboriginal cultures among the industry's workforce.

Programs to promote training and employment in the skilled trades are needed before high school to encourage Aboriginal youth to consider these trades as a viable option. Industry cannot wait for major projects to drive demand for this source of labour. It must be proactive in Aboriginal schools and in the community to attract Aboriginal youth and prepare them for work on new projects, but also for ongoing maintenance work.

### Women

Women remain an underrepresented group in the construction industry. Although there are increased numbers of women in the industry, the proportion of women in the construction trades workforce has not changed significantly (remains at around 4–5 percent). The construction workforce grew by 90 percent over the past 15 years, while women's participation grew by about 1 percent. A number of programs such as Women Building Futures;

Saskatchewan Polytechnic, Women in Trades and Technology, Build Together, Women of the Building Trades; and Canadian Association of Women in Construction, have had some success attracting and retaining women to the construction industry, but more effort is needed in this area.

### Mature/older workers

With the potential loss of 250,000 skilled workers to retirements, the industry needs to explore options to retain their skills and experience. This requires finding ways to learn about and accommodate their needs. Options for attracting and retaining mature/older workers could include less strenuous workloads, participation in “train the trainer” programs to share their experience, mentoring programs to promote youth-knowledge transfer, part-time and flexible work schedules and job sharing.

### Temporary foreign workers

Industry has identified the need for temporary foreign workers (TFW) to meet short-term peak demands for skilled tradespeople. The *Temporary Foreign Worker Program*, however, does not align with the unique characteristics of the construction industry, such as short-term employment, the need for specific skills and the likelihood of having to work for multiple employers across jurisdictions over multiple projects. The dynamic nature of the industry requires a quick, flexible approach.

### Immigrants

Immigrants will form a significant portion of the future Canadian workforce. Industry must attract and successfully integrate them as one of many strategies for managing workforce requirements. The permanent immigrant “points” system does not facilitate the entry of skilled craft workers to Canada. Meeting labour force requirements is not just about numbers; targeted immigration is necessary to address the need for skilled tradespeople. Programs that facilitate this, such as the *Provincial Nominee Program (PNP)*, *Canadian Experience Class (CEC)*, *Express Entry and Temporary Foreign Worker Program* that enable internationally trained workers to move to permanent immigrant status, are critical.

Individuals who successfully immigrate to Canada face immediate challenges beyond the workplace that must be addressed, including finding affordable housing and health care. In addition, there are workplace challenges such as understanding the industry culture, language, safety culture, transferability of skills, team interaction, assessing and recognizing qualifications, and team acceptance.

**Goal:** An ongoing sustainable supply of skilled workers appropriate to meet short- and long-term demands.

### Objectives:

1. All sources of labour (youth, women, Aboriginal people, mature workers, immigrants) maximized to meet demand for skilled workers
2. Flexible, accessible immigration and temporary foreign worker (TFW) programs to respond to industry needs

### Strategies:

- Benchmark and track representation of underrepresented groups in construction
- Research the new generation of potential workers to better understand how to attract and retain them in the construction and maintenance industry
- Continue to build on existing work in the promotion of careers in construction
- Incorporate the requirement to employ apprentices into public and private owner contracts

- Identify and share best practices in attracting, recruiting and retaining women, Aboriginal people and immigrants
- Develop community level strategies to attract and recruit Aboriginal youth
- Develop and implement a comprehensive advocacy/education plan articulating the need for temporary foreign workers
- Develop an education program to inform employers about all available immigration and TFW programs
- Facilitate recognition of international experience and qualifications

#### Leadership:

- All stakeholders to promote careers in construction
- Aboriginal engagement requires government, labour, owners and employers
- Owners take a leadership role in including apprenticeship requirements in contract language and supporting the development and completion of apprentices
- BuildForce to continue its national construction careers campaign (website and social media)

#### Measurement:

- Track the use of international workers (permanent and temporary) in the construction and maintenance industry
- Measure to what extent Canada's TFW and permanent resident program policies are responsive to labour market needs
- Track apprentice numbers and stage of apprenticeship by trade on projects
- Track owner companies that include a requirement to employ apprentices in contracts
- Measure increases in participation of women, Aboriginal people and immigrants

## 5.2 Training

Apprenticeship is the key training system for the construction and maintenance industry. The apprenticeship system is a partnership between government, employers and training providers, and is provincially legislated and administered. Given that the apprenticeship model is a combination of on-the-job and in-class training, it is critical that there is both classroom training capacity as well as employers willing to hire and train apprentices. This demands commitment from contractors and governments to support apprentices during economic upswings and downturns.

Apprenticeship and occupational certification system requirements differ from province to province. Identification of some trades as "compulsory" and stipulation that workers must have a Certificate of Qualification (C of Q) or be a registered apprentice or certified journeyman to work in some or all areas of these trades varies depending on the province. This stipulation focuses around industry's interests for worker safety and other public benefits. Most trades are voluntary and participation in apprenticeship and certification is left to the preferences of employers and workers.

The Canadian Council of Directors of Apprenticeship (CCDA) is a federally mandated group that manages a national program of endorsements to provincial certificates of qualifications. This *Red Seal Program* establishes a National Occupational Analysis (NOA) that specifies the scope of practice for each of 55 trades. All provinces recognize Red Seal qualifications as equivalent to local certification. This endorsement is clearly important for compulsory trades, but also acts as a national standard for interprovincial recruiting and job searching for voluntary trades.

The harmonization of apprenticeship is a key strategy to facilitate the mobility of skilled trades apprentices and to improve completion rates. There are currently two key harmonization initiatives underway.

1. The CCDA has undertaken an apprenticeship harmonization initiative with the following specific objectives:
  - Promote greater consistency in apprenticeship training and certification requirements in targeted Red Seal trades across Canada
  - Increase opportunities for apprentices
  - Reduce barriers to certification
  - Improve the efficiency of the apprenticeship system overall
  - Enhance mobility for apprentices
  
2. The Atlantic provinces, through the Council of Atlantic Premiers, have also been working on the harmonization of apprenticeship. This project will help harmonize training, certification and standards, leading to increased availability of training, higher apprenticeship completion rates and increased labour mobility for apprentices across Atlantic Canada. The Atlantic harmonization strategy will provide the following benefits:
  - Improved mobility through improved employer recruitment across jurisdictions
  - Faster training completion through reduced duplication and better synchronized training
  - Improved understanding and access for foreign-trained tradespeople
  - Improved speed of completion by recognizing work within different jurisdictions
  - Reduced development costs of training and exams for governments and institutions
  - Increased consistency of assessment standards and quality of achievement
  - Improved access to training through log book and curriculum alignment
  - Consistent advice and guidance to provincial authorities
  - Common advice provided to Atlantic governments on compulsory certification
  - Enhanced access to information by all stakeholders
  - Improved resource allocation, cost distribution and scheduling of training
  - The ability to compare success, improved understanding of success rates and best practices

The construction and maintenance industry in Canada is comprised of predominantly small companies employing fewer than five employees. This characteristic challenges the ability of employers to hire apprentices.

A second characteristic of the construction and maintenance industry is that in many instances the work is project-based with workers contracted for the duration of the project. The industry is also cyclical, resulting in peaks and valleys of activity. These factors challenge industry's ability to provide continuous, ongoing employment of apprentices. Strategies are required to address these structural challenges inherent in the industry.

In addition to apprenticeships, training that is required by all workers (e.g., safety) is often duplicated as workers move from project to project and province to province. This type of training could be standardized to avoid unnecessary duplication.

**Goal:** A responsive training and apprenticeship system with the capacity to meet industry requirements for a skilled workforce.

#### Objectives:

1. An apprenticeship system that recognizes participation challenges facing small employers
2. Improved apprenticeship completion rates
3. Flexible training delivery responsive to industry needs

4. Training directly linked to progression/career paths in construction
5. Consistent, high quality training based on national standards
6. Training capacity able to meet current and future requirements

#### Strategies:

- Undertake research to develop a national training inventory and identify gaps
- Develop an inventory of initiatives that address training challenges
- Create a national skills database
- Explore policies to incentivize small employers to participate in apprenticeship
- Facilitate the mobility of apprentices through cross employer agreements, employer consortiums, etc.
- Continue the work being done on harmonization of training and certification between provinces
- Support journeyman mentor development to increase apprentice retention
- Build on best practices in flexible training delivery models, including online learning, blended online/classroom training, taking training to remote areas, etc.
- Develop, promote and implement national standards and training to facilitate the transferability of training (e.g., safety, supervisor, foremen, etc.)
- Reduce the duplication of training across segments of construction/maintenance and geographic jurisdictions
- Advocate for government programs (e.g., Labour Market Development Agreements, Canada Job Grants, etc.) that address the needs of the construction and maintenance industry
- Develop and implement formalized mentoring training programs to better support the transference of skills and knowledge on the job
- Advocate for and educate employers about the importance of participating in training
- Connect training to career paths in construction
- Develop a ladder approach to skills acquisition – modular approach
- Place more focus on safety as part of apprenticeship technical training

#### Leadership:

- Employers, labour and employer associations to promote the importance of apprenticeships
- Provincial and territorial governments should be involved
- Employers, joint apprenticeship training committees and provincial authorities should take leadership roles

#### Measurement:

- Monitor apprenticeship enrollment and completion rates
- Define and measure success in apprenticeship registrations, training to completion, and remaining on the job as a journeyman
- Measure increased employer participation in apprenticeship (currently 34 percent in construction)
- Measure the retention of workers after training

## 5.3 Retention

Initial attraction into the trades is the first hurdle. Industry needs to create a welcoming environment in order to retain new workers. Work is being done to raise awareness of career opportunities in construction, but more needs to be done. There are excellent programs across the country to engage, prepare, train and mentor women and more can be done in this area as well. If industry does not create a safe, respectful and equitable environment, it will lose those who come into the industry and discourage others from considering these career opportunities. Retention is a key issue.

**Goal:** Respectful, equitable, safe work sites that support both the success of the workers and that of the construction and maintenance industry.

**Objectives:**

1. Safe, respectful and equitable workplaces
2. Improved retention of workers (youth, Aboriginal people, women, immigrants)

**Strategies:**

- Undertake research to better understand why people leave the industry and the characteristics of a successful workplace
- Develop mechanisms to keep apprentices employed during down turns
- Share existing and develop new best practices where required to support workplace diversity, including zero tolerance policies, pre-employment preparation, on-the-job mentoring, workplace respect programs, etc.
- Develop and implement diversity training

**Leadership:**

- Employers and employer associations can provide leadership in this area
- BuildForce to consider a national diversity training program
- BuildForce to consider a national retention study

**Measurement:**

- Benchmark the retention of youth, Aboriginal people, women and immigrants in the construction and maintenance workforce
- Measure the improvement in retention of youth, Aboriginal people, women and immigrants in the construction and maintenance industry

## 5.4 Mobility

Drawing upon mobile workers is an important method of addressing workforce needs for some segments of the industry; however, there are difficulties inherent in this approach. First, as the industry loses more and more workers to retirement, the availability of mobile workers may be limited. This is particularly true in the Atlantic provinces, which have typically provided a large mobile workforce for the West. The population of the Atlantic region has a lower birth rate and a higher than average population age resulting in higher retirement rates. This will mean fewer tradespeople available to work on projects outside of Atlantic Canada.

Some of the specific challenges associated with mobile workers include logistics management, such as travel and accommodation; higher than normal turnover; a cost of living that varies from province to province; recognition of provincial certification; language; cost associated with trades recognition; and hours of work/overtime costs. Given these challenges, it may be necessary to implement measures that encourage mobility, including mechanisms to validate credentials/qualifications; permanent mobility incentives to encourage people to move from areas of higher unemployment to areas of steady work; possible tax reductions to support the cost of moving; ability to test for safety, alcohol and drugs, locally; ability to test for welders, locally; and a national database of available craft labour.



**Goal:** A thriving mobile, work-ready workforce that helps to meet skilled labour demands when and where required.

**Objectives:**

1. A training and policy framework that facilitates the mobility of workers
2. More detailed data available on mobile workers
3. Social impacts associated with a mobile workforce understood and mitigated

**Strategies:**

- Undertake research to quantify the mobile workforce in Canada
- Support existing and undertake new research where required to better understand the social and financial issues facing Canada's mobile workforce
- Develop and implement a campaign to raise awareness of mobile opportunities in construction and maintenance
- Support the harmonization of apprenticeship training and certification requirements between provinces
- Develop "working mobile" training to support workers with success strategies
- Identify and advocate for policies that incentivize working mobile
- Mitigate barriers to mobility, including training transferability, social, health and financial

**Leadership:**

- National Owner's Forum
- Industry should lead; government should support. In order for this to happen, industry needs to give information to government to help in this regard
- BuildForce to form a working committee comprised of labour, owners and contractors to address this issue

**Measurement:**

- Benchmark the mobile workforce and track over time
- Track how well information is being shared over time
- Track uptake on working mobile training

## 5.5 Productivity

Productivity gains are seen as one solution to managing labour requirements, but on their own these gains will not cover longer term labour market challenges. Currently, the "time on tools" is low in segments of the industry (as much as 60 percent of the day is not on the tools). Enhancing workplace practices and promoting technological innovation and training in management/supervision and technical trades could greatly improve productivity and help reduce labour market challenges. To realize improvements, the industry must be prepared to get to the root cause of productivity issues, including factors such as leadership/supervision, engineering, procurement, over-resourcing, lack of equipment, tools and planning.

**Goal:** Improved productivity across all aspects of construction and maintenance projects, contributing to the industry's competitiveness.

#### Objectives:

1. A common definition of productivity
2. A consistent approach to tracking and measuring productivity
3. An understanding of the contributing factors to low productivity
4. Improve productivity

#### Strategies:

- Develop a national construction and maintenance industry definition of productivity
- Leverage existing work that has been done to establish a national system for tracking and measuring productivity
- Undertake research into best practices in factors that impact productivity, including legislation, shift schedules, communication, supervision and trends in minimizing time and materials, etc.
- Develop and implement national productivity training
- Continue to develop supervisor/management skills

#### Leadership:

- Owners, contractors and labour providers continue to pursue productivity improvements
- BuildForce to contact known sources of productivity work (e.g., Construction Owners Association of Alberta, University of New Brunswick, etc.) to discuss possible opportunities to build on work being done
- BuildForce will convene a working group to explore opportunities for collaboration

#### Measurement:

- National tracking system to benchmark and measure productivity "tool time" improvements

## 5.6 Stakeholder engagement

The challenges facing the construction and maintenance industry in Canada will require industry stakeholders to work collaboratively. No one organization can resolve the issues. This will require ongoing engagement to educate stakeholders about the unique features of the construction and maintenance labour market. Providing a common vision through an overarching national workforce development strategy will help to create a common language and understanding. In turn, this will facilitate collaborative action, avoid unnecessary duplication and maximize resources.

**Goal:** Broad industry stakeholder engagement that works collaboratively toward a common workforce development vision.

#### Objectives:

1. A common understanding of workforce challenges across all construction and maintenance industry stakeholders
2. Expanded involvement of industry stakeholders

**Strategies:**

- Identify and articulate opportunities for industry and government to partner
- Increase understanding of the unique features of the construction and maintenance labour market
- Convene stakeholder meetings to share and discuss challenges and solutions
- Develop a communications vehicle to support ongoing engagement and participation
- Encourage sharing of information and best practices
- Establish a central place to share data and information

**Leadership:**

- Industry associations and labour providers promote the importance of sharing information and best practices
- BuildForce to continue to expand owner participation in the National Owners Forum
- BuildForce to facilitate working groups to bring together and share best practices
- BuildForce to host regular quadripartite (owners, contractors, labour, government) meetings
- BuildForce to use its national reach to support the strategy and share information about initiatives, programs and activities with industry stakeholders

**Measurement:**

- Measure the change in National Owners Forum participation
- Measure the distribution of reports resulting from the Summit
- Monitor the sharing of information resulting from the Summit and subsequent related work through BuildForce and its partners on an ongoing basis

## 6. Conclusion

This document represents the views expressed at the June 2015 BuildForce National Construction and Maintenance Industry Summit by more than 80 industry stakeholders from across Canada representing owners, contractors, labour providers, industry associations and governments. Industry stakeholders identified the objectives and strategic priorities needed to address workforce challenges and requirements. These challenges are affecting the short-, medium- and long-term capacity of the construction and maintenance industry in Canada. There is strong consensus that a time of projected slower growth provides an opportunity for increased focus and action to address industry challenges created by the aging demographic and resulting retirements. The challenges are complex and require multiple strategies and multiple stakeholders to resolve, to ensure the industry has the long-term sustainable workforce it will require.

An ongoing national venue is necessary to identify challenges and engage the diversity of stakeholders to meet these identified needs by leveraging their common expertise, knowledge and resources.

We hope this document will provide a roadmap for future work to address the industry's workforce development needs. For its part, BuildForce Canada will keep this document evergreen and will continue to provide opportunities to engage industry stakeholders on issues emerging from its labour market forecasts. We will also undertake workforce development initiatives based on that engagement. BuildForce will also seek opportunities to bring groups together around specific issues and to share other resources available to the industry.

## Appendix – Strategy Summary

OBJECTIVES	STRATEGIES	MEASUREMENT	LEADERSHIP
<p><b>RECRUITMENT</b></p> <p><b>Goal:</b> An ongoing sustainable supply of skilled workers appropriate to meet short- and long-term demands.</p>			
<ol style="list-style-type: none"> <li>1. All sources of labour (youth, women, Aboriginal people, mature workers, immigrants) maximized to meet demand for skilled workers</li> <li>2. Flexible, accessible immigration and Temporary Foreign Worker (TFW) programs to respond to industry needs</li> </ol>	<ul style="list-style-type: none"> <li>• Benchmark and track representation of underrepresented groups in construction</li> <li>• Research the new generation of potential workers to better understand how to attract and retain them in the construction and maintenance industry</li> <li>• Continue to build on existing work in the promotion of careers in construction</li> <li>• Incorporate the requirement to employ apprentices into public and private owner contracts</li> <li>• Identify and share best practices in attracting, recruiting and retaining women, Aboriginal people and immigrants</li> <li>• Develop community level strategies to attract and recruit Aboriginal youth</li> <li>• Develop and implement a comprehensive advocacy/education plan articulating the need for temporary foreign workers</li> <li>• Develop an education program to inform employers about all available immigration and TFW programs</li> <li>• Facilitate recognition of international experience and qualifications</li> </ul>	<ul style="list-style-type: none"> <li>• Track the use of international workers (permanent and temporary) in the construction and maintenance industry</li> <li>• Measure to what extent Canada's TFW and permanent resident program policies are responsive to labour market needs</li> <li>• Track apprentice numbers and stage of apprenticeship by trade on projects</li> <li>• Track owner companies that include a requirement to employ apprentices in contracts</li> <li>• Measure increases in participation of women, Aboriginal people and immigrants</li> </ul>	<ul style="list-style-type: none"> <li>• All stakeholders to promote careers in construction</li> <li>• Aboriginal engagement requires government, labour, owners and employers</li> <li>• Owners take a leadership role in including apprenticeship requirements in contract language and supporting the development and completion of apprentices</li> <li>• BuildForce to continue its national construction careers campaign (website and social media)</li> </ul>

OBJECTIVES	STRATEGIES	MEASUREMENT	LEADERSHIP
<p><b>TRAINING</b></p> <p><b>Goal: A responsive training and apprenticeship system with the capacity to meet industry requirements for a skilled workforce.</b></p>			
<ol style="list-style-type: none"> <li>1. An apprenticeship system that recognizes participation challenges facing small employers</li> <li>2. Improved apprenticeship completion rates</li> <li>3. Flexible training delivery responsive to industry needs</li> <li>4. Training directly linked to progression/ career paths in construction</li> <li>5. Consistent, high quality training based on national standards</li> <li>6. Training capacity able to meet current and future requirements</li> </ol>	<ul style="list-style-type: none"> <li>• Undertake research to develop a national training inventory and identify gaps</li> <li>• Develop an inventory of initiatives that address training challenges</li> <li>• Create a national skills database</li> <li>• Explore policies to incentivize small employers to participate in apprenticeship</li> <li>• Facilitate the mobility of apprentices through cross employer agreements, employer consortiums, etc.</li> <li>• Continue the work being done on harmonization of training and certification between provinces</li> <li>• Support journeyman mentor development to increase apprentice retention</li> <li>• Build on best practices in flexible training delivery models, including online learning, blended online/classroom training, taking training to remote areas, etc.</li> <li>• Develop, promote and implement national standards and training to facilitate the transferability of training (e.g., safety, supervisor, foremen, etc.)</li> <li>• Reduce the duplication of training across segments of construction/maintenance and geographic jurisdictions</li> <li>• Advocate for government programs (e.g., Labour Market Development Agreements, Canada Job Grants, etc.) that address the needs of the construction and maintenance industry</li> <li>• Develop and implement formalized mentoring training programs to better support the transference of skills and knowledge on the job</li> <li>• Advocate for and educate employers about the importance of participating in training</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor apprenticeship enrollment and completion rates</li> <li>• Define and measure success in apprenticeship registrations, training to completion, and remaining on the job as a journeyman</li> <li>• Measure increased employer participation in apprenticeship (currently 34 percent in construction)</li> <li>• Measure the retention of workers after training</li> </ul>	<ul style="list-style-type: none"> <li>• Employers, labour and employer associations to promote the importance of apprenticeships</li> <li>• Provincial and territorial governments should be involved</li> <li>• Employers, joint apprenticeship training committees and provincial authorities should take leadership roles</li> </ul>

OBJECTIVES	STRATEGIES	MEASUREMENT	LEADERSHIP
	<ul style="list-style-type: none"> <li>• Connect training to career paths in construction</li> <li>• Develop a ladder approach to skills acquisition – modular approach</li> <li>• Place more focus on safety as part of apprenticeship technical training</li> </ul>		
<p><b>RETENTION</b></p> <p><b>Goal: Respectful, equitable, safe work sites that support both the success of the workers and that of the construction and maintenance industry.</b></p>			
<ol style="list-style-type: none"> <li>1. Safe, respectful and equitable workplaces</li> <li>2. Improved retention of workers (youth, Aboriginal people, women, immigrants)</li> </ol>	<ul style="list-style-type: none"> <li>• Undertake research to better understand why people leave the industry and the characteristics of a successful workplace</li> <li>• Develop mechanisms to keep apprentices employed during down turns</li> <li>• Share existing and develop new best practices where required to support workplace diversity, including zero tolerance policies, pre-employment preparation, on-the-job mentoring, workplace respect programs, etc.</li> <li>• Develop and implement diversity training</li> </ul>	<ul style="list-style-type: none"> <li>• Benchmark the retention of youth, Aboriginal people, women and immigrants in the construction and maintenance workforce</li> <li>• Measure the improvement in retention of youth, Aboriginal people, women and immigrants in the construction and maintenance industry</li> </ul>	<ul style="list-style-type: none"> <li>• Employers and employer associations can provide leadership in this area</li> <li>• BuildForce to consider a national diversity training program</li> <li>• BuildForce to consider a national retention study</li> </ul>
<p><b>MOBILITY</b></p> <p><b>Goal: A thriving mobile, work-ready workforce that helps to meet skilled labour demands when and where required.</b></p>			
<ol style="list-style-type: none"> <li>1. A training and policy framework that facilitates the mobility of workers</li> <li>2. More detailed data available on mobile workers</li> <li>3. Social impacts associated with a mobile workforce understood and mitigated</li> </ol>	<ul style="list-style-type: none"> <li>• Undertake research to quantify the mobile workforce in Canada</li> <li>• Support existing and undertake new research where required to better understand the social and financial issues facing Canada's mobile workforce</li> <li>• Develop and implement a campaign to raise awareness of mobile opportunities in construction and maintenance</li> <li>• Support the harmonization of apprenticeship training and</li> </ul>	<ul style="list-style-type: none"> <li>• Benchmark the mobile workforce and track over time</li> <li>• Track how well information is being shared over time</li> <li>• Track uptake on working mobile training</li> </ul>	<ul style="list-style-type: none"> <li>• National Owner's Forum</li> <li>• Industry should lead; government should support. In order for this to happen, industry needs to give information to government to help in this regard</li> <li>• BuildForce to form a working</li> </ul>

OBJECTIVES	STRATEGIES	MEASUREMENT	LEADERSHIP
	certification requirements between provinces <ul style="list-style-type: none"> <li>• Develop “working mobile” training to support workers with success strategies</li> <li>• Identify and advocate for policies that incentivize working mobile</li> <li>• Mitigate barriers to mobility, including training transferability, social, health and financial</li> </ul>		committee  comprised of labour, owners and contractors to address this issue
<p><b>PRODUCTIVITY</b></p> <p><b>Goal: Improved productivity across all aspects of construction and maintenance projects, contributing to the industry’s competitiveness.</b></p>			
<ol style="list-style-type: none"> <li>1. A common definition of productivity</li> <li>2. A consistent approach to tracking and measuring productivity</li> <li>3. An understanding of the contributing factors to low productivity</li> <li>4. Improve productivity</li> </ol>	<ul style="list-style-type: none"> <li>• Develop a national construction and maintenance industry definition of productivity</li> <li>• Leverage existing work that has been done to establish a national system for tracking and measuring productivity</li> <li>• Undertake research into best practices in factors that impact productivity, including legislation, shift schedules, communication, supervision and trends in minimizing time and materials, etc.</li> <li>• Develop and implement national productivity training</li> <li>• Continue to develop supervisor/management skills</li> </ul>	<ul style="list-style-type: none"> <li>• National tracking system to benchmark and measure productivity “tool time” improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Owners, contractors and labour providers continue to pursue productivity improvements</li> <li>• BuildForce to contact known sources of productivity work (e.g., Construction Owners Association of Alberta, University of New Brunswick, etc.) to discuss possible opportunities to build on work being done</li> <li>• BuildForce will convene a working group to explore opportunities for collaboration</li> </ul>

OBJECTIVES	STRATEGIES	MEASUREMENT	LEADERSHIP
<p><b>STAKEHOLDER ENGAGEMENT</b></p> <p><b>Goal:</b> Broad industry stakeholder engagement that works collaboratively toward a common workforce development vision.</p>			
<ol style="list-style-type: none"> <li>1. A common understanding of workforce challenges across all construction and maintenance industry stakeholders</li> <li>2. Expanded involvement of industry stakeholders</li> </ol>	<ul style="list-style-type: none"> <li>• Identify and articulate opportunities for industry and government to partner</li> <li>• Increase understanding of the unique features of the construction and maintenance labour market</li> <li>• Convene stakeholder meetings to share and discuss challenges and solutions</li> <li>• Develop a communications vehicle to support ongoing engagement and participation</li> <li>• Encourage sharing of information and best practices</li> <li>• Establish a central place to share data and information</li> </ul>	<ul style="list-style-type: none"> <li>• Measure the change in National Owners Forum participation</li> <li>• Measure the distribution of reports resulting from the Summit</li> <li>• Monitor the sharing of information resulting from the Summit and subsequent related work through BuildForce and its partners on an ongoing basis</li> </ul>	<ul style="list-style-type: none"> <li>• Industry associations and labour providers promote the importance of sharing information and best practices</li> <li>• BuildForce to continue to expand owner participation in the National Owners Forum</li> <li>• BuildForce to facilitate working groups to bring together and share best practices</li> <li>• BuildForce to host regular quadripartite (owners, contractors, labour, government) meetings</li> <li>• BuildForce to use its national reach to support the strategy and share information about initiatives, programs and activities with industry stakeholders</li> </ul>