



Nova Scotia Skilled Trades: Apprenticeship in the Time of COVID-19



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Executive Summary

This report provides data and analysis on apprenticeship trends and projections from the Canadian System for Tracking Apprenticeship Qualifications (CANTRAQ) to provide a forward-looking assessment of demand and supply for trade certification across 31 apprenticeable trade programs in Nova Scotia over the coming decade. This report aims to provide the Nova Scotia Apprenticeship Agency with labour market data and analysis to aid in assessing the impact of COVID-19 on training and certification requirements for the province.

The COVID-19 pandemic has starved tourism, reduced and shifted consumer spending, disrupted current and future labour supply and slowed immigration. These effects have contributed to an economic contraction in 2020, with the brunt of the impacts absorbed by private service sectors, especially accommodation and food services, arts, entertainment and recreation, retail trade, as well as export driven manufacturing. A strong recovery is expected to occur in 2021 led by recoveries in tourism and exports, and a strong increase in public sector construction investment.

Although employment will likely take two years to fully recover losses experienced in 2020, the disruptions caused in the labour force due to falling participation rates, volatile swings in unemployment and a redistribution of available workers across industries and occupations may cause unique and new challenges for employers as demand recovers.

Young workers and apprentices in many sectors have experienced significant setbacks which presents long-term supply risks. The Canadian Apprenticeship Forum (CAF) conducted an ePanel survey to assess the impact of COVID-19 on apprentices in Canada. Analysis of approximately 650 respondents' answers indicate there has been a -20% decline in full-time apprentices and journeypersons in Nova Scotia as a result of COVID-19. Nearly a quarter of apprentices across Canada reported they were considering leaving the skilled trades, while one-third did not expect to find work with their employer again.

Preliminary year-to-date apprenticeship registration data suggests a sharp 41% drop in new apprentice registrations in 2020, assuming the rate of new registrations observed in the first six months of 2020 remains constant over the remainder of the year. Notwithstanding a strong recovery in the remaining months of the year, Nova Scotia could expect over 600 fewer new apprentices in 2020 compared to the previous year. This annual decline and potential permanent loss of many existing apprentices already in the system pose a significant risk to availability of certified tradespeople in future years.

Despite the employment decline in 2020, older age demographics continue to drive retirements and hiring requirements. It is estimated that the province will require approximately **11,179** new certified tradespeople to meet sector demand requirements over the next ten years, accounting for both growth recovery and retirements.

Based on the CANTRAQ analysis Table 1 provides a summary of the projected number of new registrations by trade program over the 2021 to 2030 outlook period. The following table also presents the projected number of program completions and certification requirements to meet employment and replacement demand by trade program. Program/trade market conditions are characterized as either being *at risk*, *balanced*, or having *ample supply*. The assessment assumes current rates of completion are maintained.

Table 1 – Program Certification Requirements and Anticipated Completions

Ample Supply	Trade Program	Anticipated Registrations	Anticipated Completions	Certifications Required
	Boilermaker	61	65	17
	Insulator (Heat and Frost)	148	79	25
	Refrigeration and Air Conditioning Mechanic	595	441	173
Balanced	Trade Program	Anticipated Registrations	Anticipated Completions	Certifications Required
	Construction Electrician	2,488	1,313	831
	Industrial Instrumentation and Control Technician	148	47	30
	Ironworker (Reinforcing)	95	34	23
	Truck and Transport Mechanic	954	521	430
	Sprinkler Fitter	149	80	56
	Sheet Metal Worker	370	198	172
	Oil Heat System Technician	196	74	69
	Gasfitter (A+B)	503	187	182
	Plumber	1,266	465	458
	Metal Fabricator (Fitter)	326	118	123
Automotive Service Technician	2,288	1,042	1,278	
At Risk	Trade Program	Anticipated Registrations	Anticipated Completions	Certifications Required
	Industrial Mechanic (Millwright)	424	273	407
	Welder	598	398	626
	Powerline Technician	163	70	118
	Ironworker (Structural/Ornamental)	66	39	67
	Motor Vehicle Body Repairer (Metal and Paint)	397	150	349
	Industrial Electrician	383	149	420
	Steamfitter/Pipefitter	318	133	378
	Boat Builder	40	10	30
	Heavy Duty Equipment Technician	179	86	271
	Bricklayer	151	39	124
	Power Engineer	238	22	111
	Mobile Crane Operator	83	18	110
	Machinist	163	64	446
	Carpenter	1,388	296	2,094
	Roofer	70	19	177
Cook	640	115	1,586	

Ample Supply = Difference between certifications required and anticipated completions <0.6%, **Balanced** = Difference <1.5% and >= 0.6%, **At Risk** = Difference >1.5%

Introduction

This report is intended to provide industry and other apprenticeship system partners and stakeholders with a sector-specific outlook of anticipated economic and labour market conditions to help assess the impact of the COVID-19 pandemic on current and future apprenticeship training requirements in the province of Nova Scotia.

Examining trends in the demand and supply for qualifications and the underlying occupational hiring requirements driven by changing economic conditions and workforce demographics, provides a unique tool to track the demand for apprenticeship qualifications. It also identifies potential changes in rates of workforce certification for individual skilled trades and occupations.

A key objective of this report is to provide industry with forward looking, qualification-based Labour Market Information (Q-LMI), which will help employers, partners and other stakeholders anticipate future skills and certification requirements. With this information they can respond in advance to potential labour market challenges or mismatches. This is especially important for trades with longer training periods and/or where certification is compulsory.

To address this objective, this report consolidates current information from recent provincial economic forecasts and sectoral labour market studies, including the 2020 BuildForce Canada Construction Outlook, and provincial macroeconomic projections produced by Stokes Economic Consulting (SEC). The detailed qualification-based analysis for individual trade programs is based on the Canadian System for Tracking Apprenticeship Qualifications (CANTRAQ) developed and maintained by Prism Economics and Analysis. The economic and demographic assumptions upon which the analysis is based, as well as the historical program registrations and completions data, were validated with government, industry and other apprenticeship stakeholders.

This report provides growth and employment outlooks for four major trade sectors in Nova Scotia:

- Construction
- Industrial Manufacturing
- Service
- Motive Power

It further examines the associated apprenticeship training and certification requirements for individual trade programs within these sectors for the 10-year period between 2021-2030. Analysis for individual trades was limited to programs tracked within CANTRAQ, as certain trade programs had insufficient data available to conduct a meaningful analysis due to the low volume of new apprentices and completions reported.

Each section describes the expected economic and employment outlook and related program demand requirements, as well as supply side estimates of program registrations, and completions for individual trades within each of the four major trade sectors.

Economic and Population Outlook

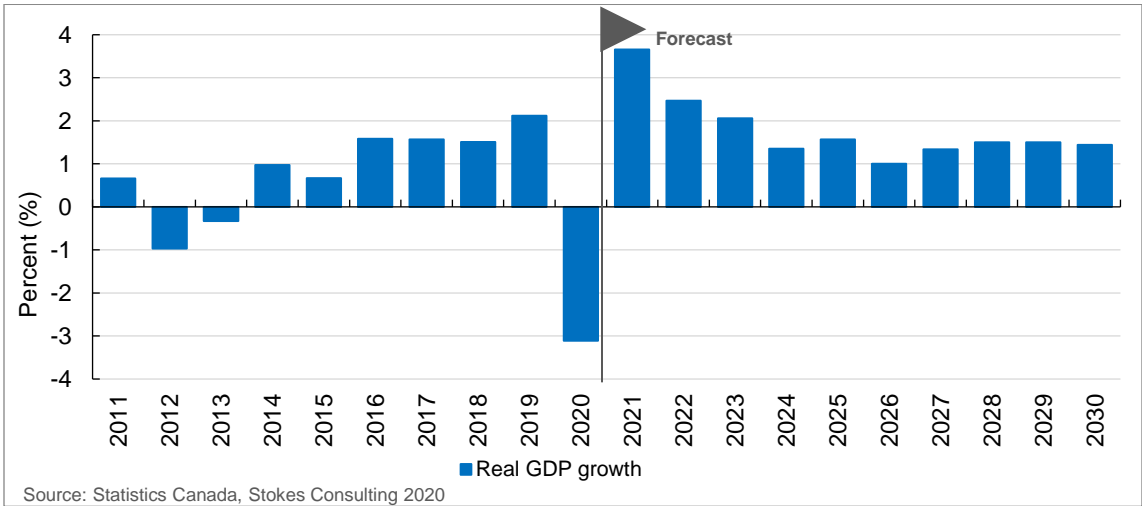
Economic Outlook

Gross Domestic Product

Nova Scotia experienced a recession in 2020, followed by an anticipated recovery in 2021. The economic lockdown generated a significant supply side impact as many businesses were forced to shutdown or curtail operations, resulting in income losses and a cutback in consumer spending. The “Atlantic bubble,” created over the summer, partly shielded the region from the spread of COVID-19 and allowed much of the economy to stay open, but the restrictions on travel to the region devastated many tourism-dependent sectors.

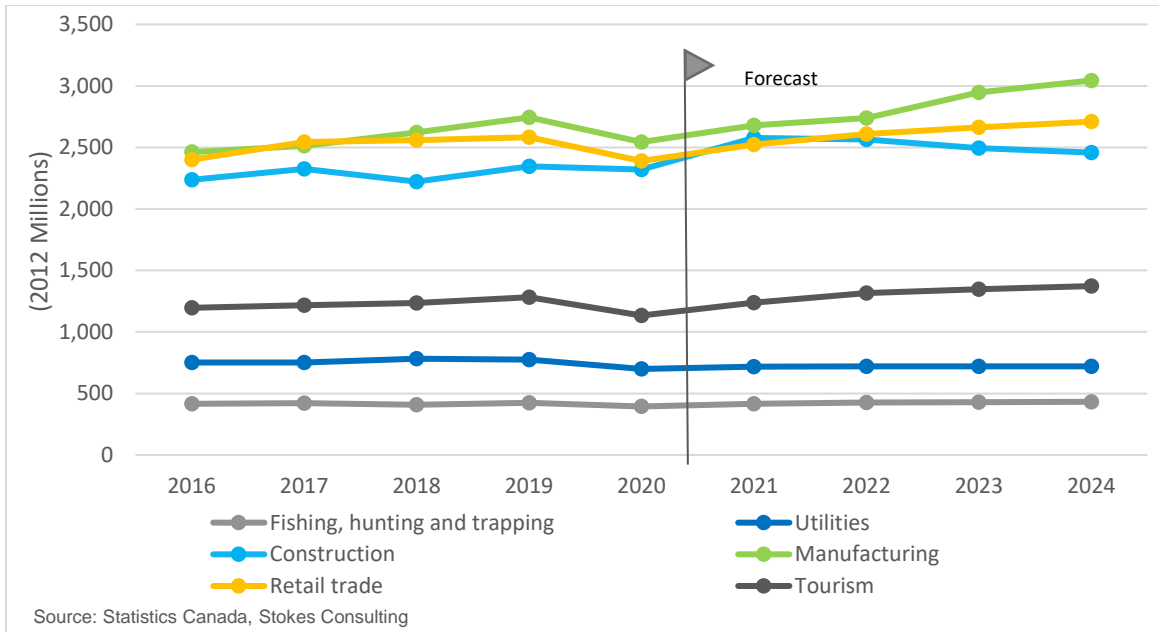
Nova Scotia experienced smaller economic losses compared to many other Canadian provinces in 2020. Real Gross Domestic Product (GDP) is expected to contract by -3.1% in 2020, compared with a decline of approximately -6% nationally as energy producing and major manufacturing provinces drive down GDP. The province is expected to experience a rebound of 3.6% in 2021 as the economy fully reopens and consumers begin to regain confidence. Looking further ahead, a favourable exchange rate is expected to support expansion of manufacturing output and export growth while Federal ship building programs will contribute positively to GDP over the latter half of the coming decade.

Figure 1 – Provincial Real GDP Growth, Nova Scotia, 2011 to 2030



Tourism and retail trade sectors were hit hardest by the restrictions imposed by COVID-19. Provincial GDP in these sectors fell to -12% and -7% respectively in 2020 and are not expected to fully recover until 2022.

Figure 2 – Real GDP for Key Goods-Producing Sectors of the Economy (\$2012 Millions)

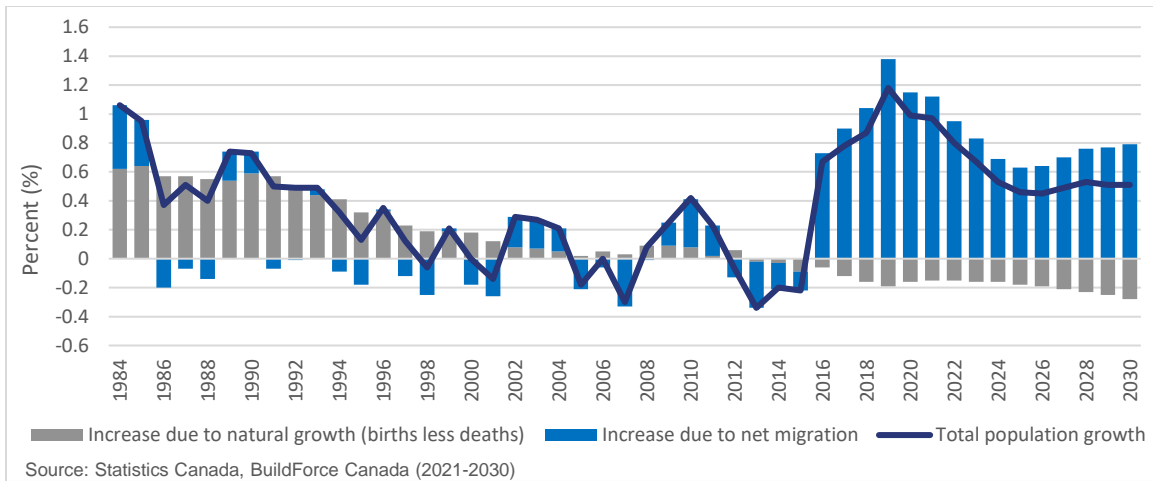


Population Outlook

Nova Scotia migration levels increased significantly over the past four years due in part to the success of the Atlantic Immigration Pilot. Immigration is expected to decline sharply in 2020 and continue to recede from peak levels as COVID-19 restrictions on international travel severely impacted international migration. Although international migration is anticipated to remain elevated into 2021, temporary foreign workers are anticipated to be subdued as a high number of domestic workers will be unemployed and will likely be prioritized for filling job vacancies as the economy recovers.

Over the next decade, migration levels are anticipated to decline from the peak, but are expected to remain well above historic levels. Net interprovincial flows are also expected to moderate in the near-term resulting from elevated unemployment across the country combined with job market uncertainty. Impediments to international and interprovincial mobility may further constrain the province’s ability to meet labour demand requirements in certain sectors.

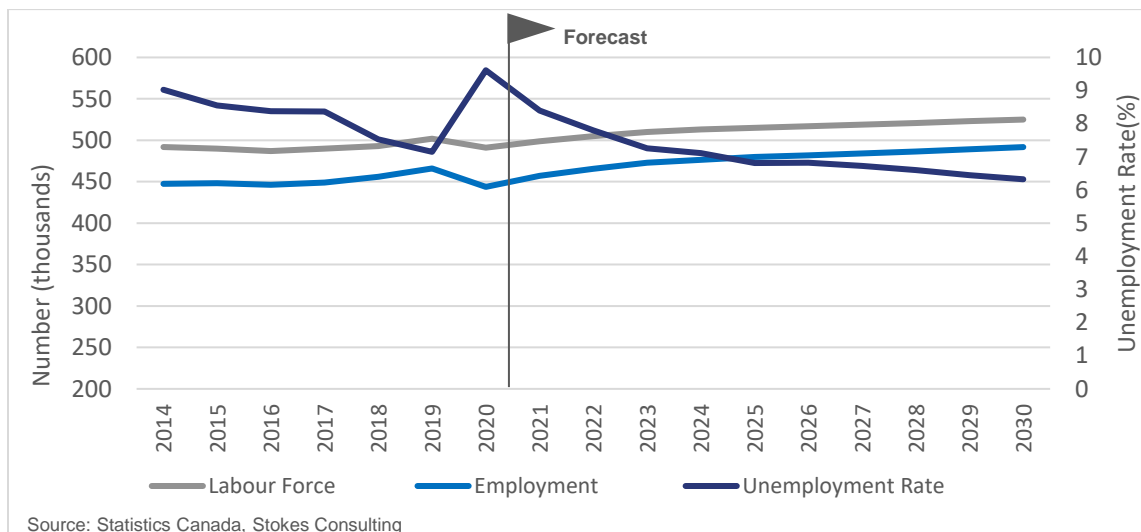
Figure 3 – Components of Population Growth (Percent, %), Nova Scotia, 1984 to 2030



Employment Outlook

Provincial employment contracted -5% in 2020, followed by an anticipated recovery of 3% in 2021. Employment is anticipated to return to 2019 peak levels by 2022 and continue to rise thereafter. Unemployment reached 9.6% in 2020, the highest unemployment rate in the province since 2010. Falling participation rates constrained the unemployment rate as many individuals exited the labour force due to COVID-19. Workforce participation rates are expected to recover with the resumption of school and decline in support programs during the latter half of 2020 and into 2021.

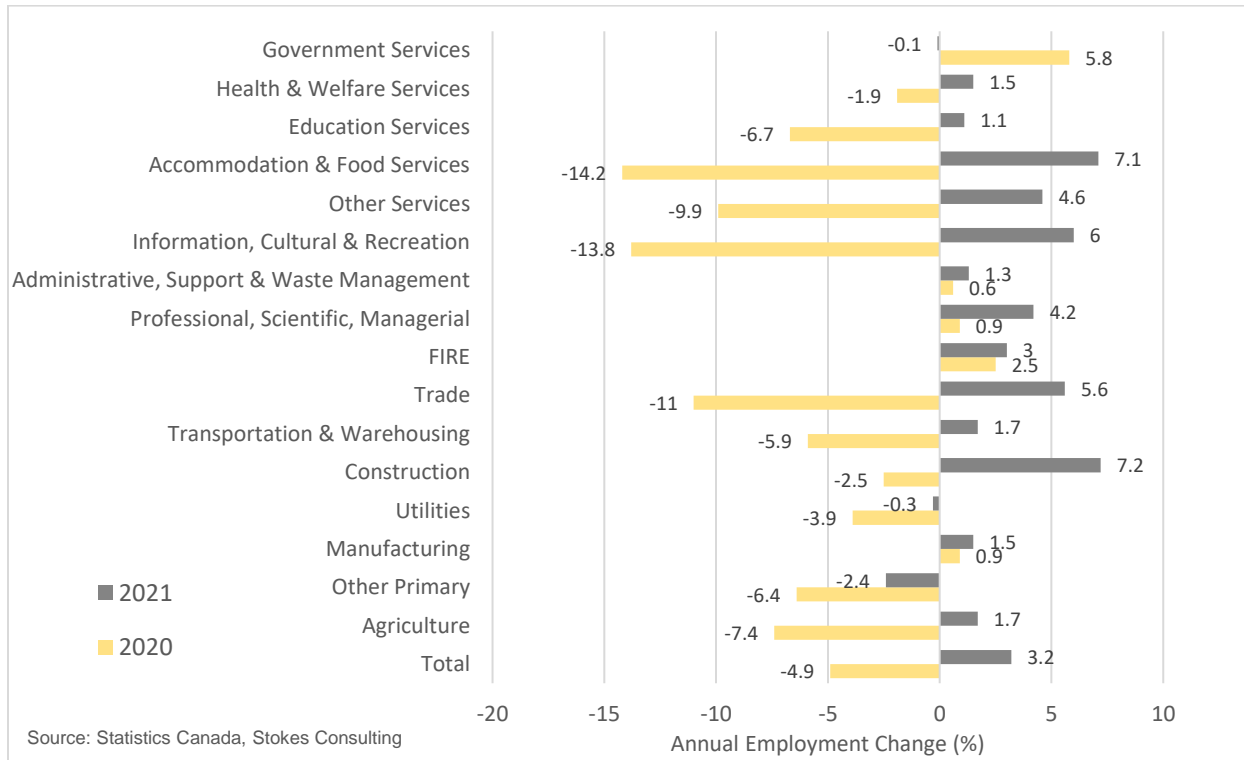
Figure 4 – Employment, Labour Force and Unemployment Rate for All Industries



The impact of COVID-19 has devastated some service-related industries. Significant (>10%) employment losses were evident in Accommodation and food services, Information, culture and recreation, and Trade (retail). These sectors are expected to experience a recovery in 2021, partially regaining the jobs lost during the pandemic. Industries including Manufacturing, finance, insurance, and real Estate (FIRE), Professional, scientific, managerial, as well as Administrative, support & waste management, and Government services experienced employment gains over the same period.

In the near-term, employment growth will be primarily centered around industries recovering from job losses during the pandemic, combined with strong anticipated gains in construction demand.

Figure 5 – Annual Employment Change by Industry, 2020 and 2021



Impact of COVID-19 on Apprenticeship

The pandemic has resulted in a sharp decline in new apprentices and limited in-person training capacity in accordance with health and safety guidelines. Both of which present a risk to the supply of certified tradespeople in the coming years.

The following details the status of training and certification in Nova Scotia over the course of the pandemic.¹

March 2020: The start of the pandemic. All technical training and examinations were deferred until further notice, apprentices that were laid off as a result of the pandemic /unable to return to work were instructed to apply for employment Insurance (EI).

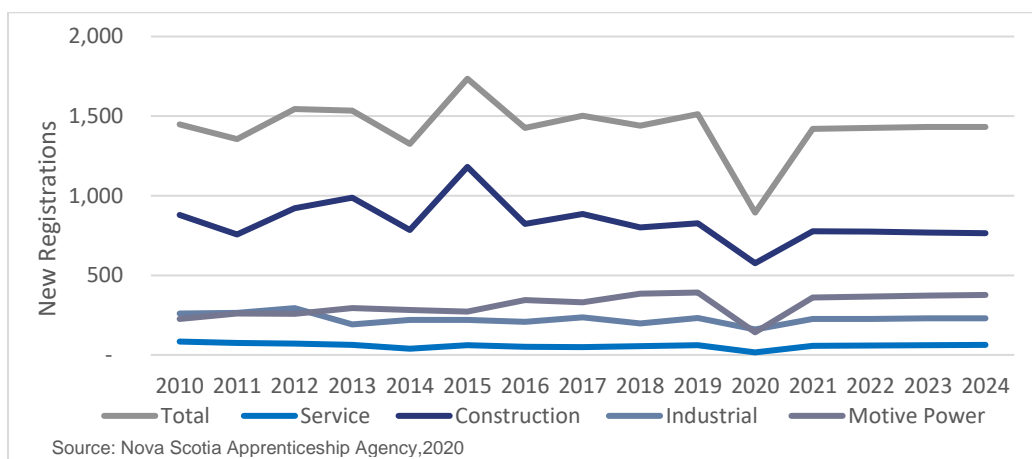
April 2020: Apprentices who were in the process of completing their training when COVID-19 hit were offered the option of continuing technical training through a remote delivery format in trades where this was available, accessing asynchronous on-line training were available or choosing to continue to defer their training until in-person training could safely resume. Individual special sittings of certification exams continued; however large exams sittings were still being deferred at this time.

June 2020: Certification and level examinations resumed in reduced sittings as approved by Public Health.

September 2020: The new apprenticeship technical training year commenced and proceeded in a blended format, including a combination of remote learning and in-shop practical learning, depending on the trade. Technical training remained full-time during this period.

COVID-19 has had a significant impact on new registrations in the province. Total new registrations are anticipated to decline -41% from 2019 levels, assuming the rate of new registrations observed in the first six months of the 2020 remain constant over the remainder of the year. The service and motive sectors are expected to experience the largest declines, falling -76% and -64% respectively.

Figure 6 – New Registrations in Apprenticeship Programs by Sector, Nova Scotia, 2010 to 2024

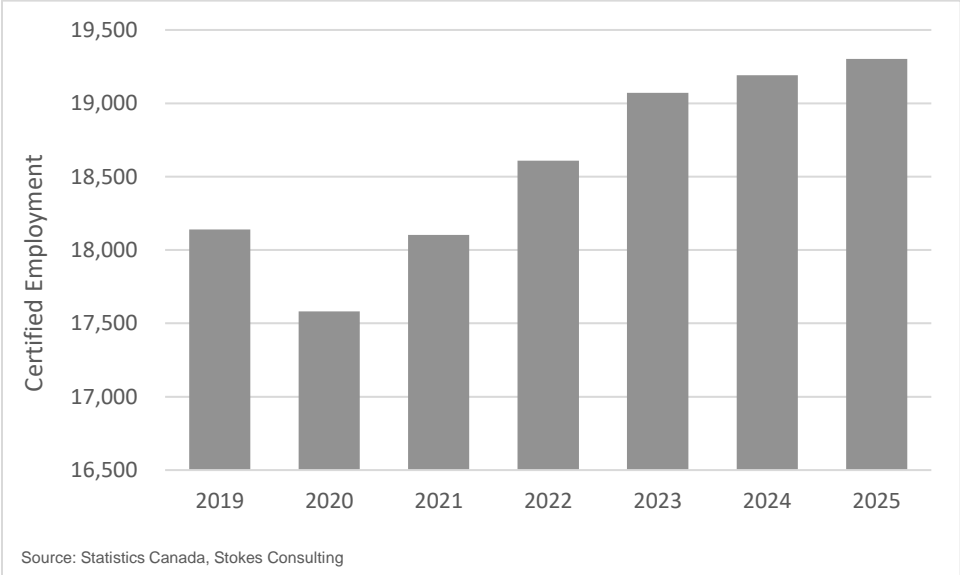


¹ Nova Scotia Apprenticeship Agency, Coronavirus Disease (COVID-19) Update. <https://nsapprenticeship.ca/agency/covid-19-information>

The Canadian Apprenticeship Forum (CAF) conducted an ePanel survey to assess the impact of COVID-19 on apprentices in Canada. Analysis of approximately 650 respondents indicate there has been a -20% decline in full-time apprentices and journeypersons in Nova Scotia as a result of COVID-19. Nearly a quarter of apprentices across Canada reported they were considering leaving the skilled trades, while one-third did not expect to find work with their employer again.

The decline in new registrations coupled with the attrition of active apprentices and certified tradespeople may have crippling effects on the supply of skilled workers over the coming decade. Employment of certified workers is anticipated to see a slight recovery in 2021 with continued growth into 2025 (Figure 7). The aging demographic of the province will also add to the need for skilled labour. Accounting for both employment growth and rising rates of retirement, approximately **11,179** newly certified journeypersons are required to keep pace with demand requirements over the next decade. Increasing the average rate of completions for trade programs will be crucial in meeting demand requirements. This will be increasingly important if COVID-19 travel restrictions remain in place, limiting the province’s ability to source skilled labour.

Figure 7 – Total Certified Workforce, Apprenticesable Trades, 2019 to 2025



Sectoral Analysis and Assessment of Apprenticeship Certification Requirements

The next sections of this report focus on the growth outlook, occupational hiring requirements and related training and certification demands for individual apprenticeable trade programs in each of the following four sectors:

- Construction
- Industrial/Manufacturing
- Service
- Motive Power

The apprenticeship training and certification requirements outlook provides a detailed projection of the number of apprenticeship program completions and new registrations required to maintain workforce certification rates in apprenticeable trades (principal trades). The analysis also considers the certification demands for other jobs which utilize the skills represented by certificates of qualifications (CofQs). These include occupations such as: senior managers, contractors, supervisors, building inspectors, vocational trainers, sales reps, etc. For example, certified journeypersons (CofQ holders) during their career might work in a principal trade such as cook but also in related occupations such as restaurant and food service manager.


The following provides a short summary of the variables used to determine demand:


- **New registrants:** Number of new individuals that register in each trade program in a given year. New registrations in 2020 were estimated based on data provided for the first half of the year.
- **Target new registrations:** Number of new registrations in a given year required to sustain future workforce certification rates at current levels. This target is calculated using the historic completion rate of the trade.
- **Completions:** Number of individuals that complete a program in a given year. The projection for completions is estimated based on recent trends in program completion rates. Completions are based on new registration levels from several years prior, depending on the duration of the program. Completions in 2020 were estimated based on data provided for the first half of the year.
- **Completion rate:** Ratio of completers in a given year to the moving average of new registrants in a previous period equal to the expected duration of the program. The moving average is used to account for fluctuations in the actual average time apprentices take to complete programs.
- **Replacement demand:** Hiring demand related to workforce retirement or death.
- **Expansion demand:** Hiring demand related to change in workforce employment.
- **Principal trade:** an apprenticeable trade assessed in the analysis.
- **Related occupation/certification:** Trades and occupations, other than the principal trade, which utilize the skills represented by a certificate of qualification (CofQs). Related trade and occupation values are suppressed for trades with very low levels of related demand, resulting in related demand being zero for certain principal trades and occupations.


- **Compulsory trade:** the scope of work of a compulsory trade is restricted to certified journeypersons or registered apprentices.
- **Total Demand for Certificate:** Total hiring requirements including expansion and replacement demand for both principal and related trade occupations.
- **Certified workforce:** The estimated number of individuals employed in a (NOC-4) classified trade or occupation that hold a certificate of qualification.


Trades in Nova Scotia

The CANTRAQ model tracks 31 apprenticeable trades in Nova Scotia. These trade programs are categorized into four main sector groups. The trade sectors in Nova Scotia are:

 Construction Sector
Boilermaker
Bricklayer
Carpenter
Construction Electrician
Gas Fitter (A and B)
Insulator (Heat and Frost)
Ironworker (Reinforcing)
Ironworker (Structural/Ornamental)
Mobile Crane Operator
Oil Heat System Technician
Plumber
Powerline Technician
Refrigeration and Air Conditioning Mechanic
Roofer
Sheet Metal Worker
Sprinkler Fitter
Steamfitter/Pipefitter

 Industrial/Manufacturing Sector
Boat Builder
Industrial Electrician
Industrial Mechanic (Millwright)
Instrumentation and Control Technician
Machinist
Metal Fabricator (Fitter)
Power Engineer
Welder

 Motive Power Sector
Automotive Service Technician
Automotive Service Technician (Service Station Mechanic)
Heavy Duty Equipment Technician
Motor Vehicle Body Repairer (Metal and Paint)
Truck and Transport Mechanic

 Service Sector
Cook

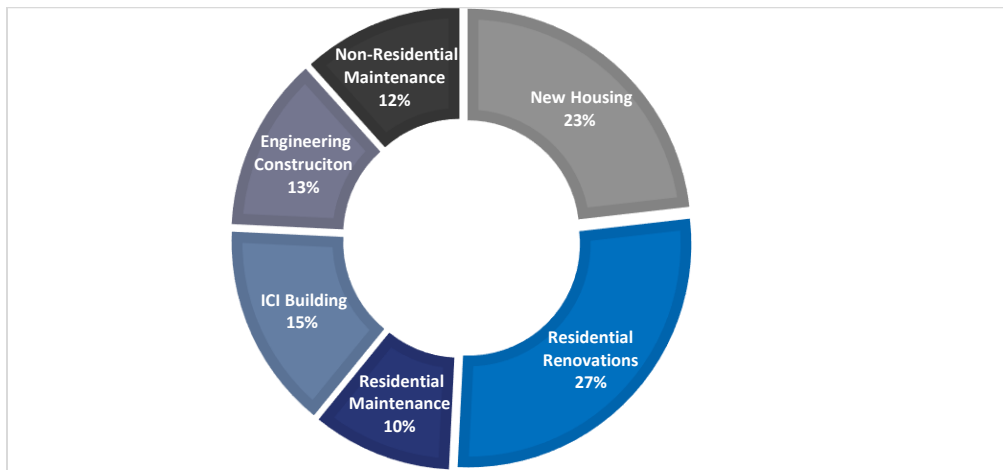


Construction Sector

The construction sector is one of the largest trade sectors in Nova Scotia, employing approximately 34,000 people in 2020. Construction activity is categorized in three main segments, though there is significant overlap and mobility between market segments.

- Residential building construction trades are engaged in constructing, renovating, and maintaining houses and apartment buildings.
- Non-residential Institutional, Commercial and Industrial (ICI) building construction trades are involved in the construction, renovation and maintenance of stores, warehouses, offices and government buildings.
- Engineering trades are engaged in heavy engineering (oil and gas, mining) or civil engineering work (roads, bridges and other infrastructure).

Figure 8 – Distribution of construction employment in 2020



Source: BuildForce Canada, 2021

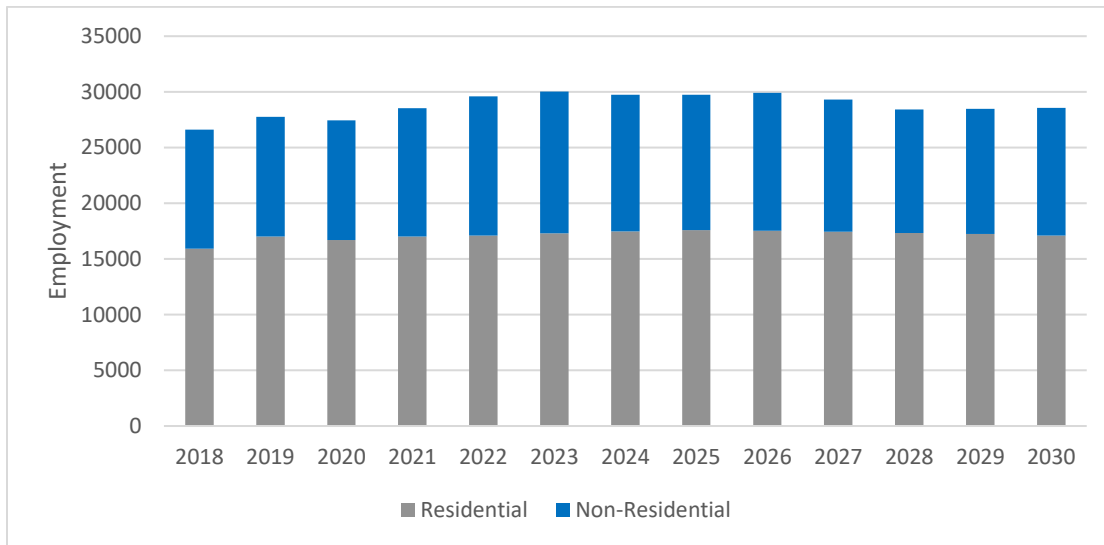
Construction employment in Nova Scotia held up relatively well through 2020 and is estimated to have declined by -2.5% relative to 2019, a very modest decline compared to other economic sectors. Employment requirements are expected to strengthen considerably in 2021 with a resumption in growth in new home construction and an expected to ramp up in non-residential requirements, driven by the start of several new large hospital projects.

BuildForce Canada anticipates industry employment requirements to peak around 2023, inline with the anticipated timing of public sector investment and increased mining, gas decommissioning activities, and other various

infrastructure work. Residential employment is anticipated to rise moderately through to 2025 before declining over the latter half of the decade as immigration and population growth slow.

Nova Scotia is entering a period of growth while retirements continue to rise. This dynamic is projected to result in tight labour market conditions as hiring requirements rise to the anticipated peak in 2023.

Figure 9 – Construction Trades Employment, 2018 to 2030



Source: BuildForce Canada, 2021

Recruitment and training have been impeded by the COVID19 pandemic which contributed to a significant -30% drop in new registrations in construction trade programs compared to 2019 levels. New registrations are anticipated to recover in 2021, in line with rising demand in new housing construction and an expected surge in non-residential requirements driven by the planned start of multiple major health and education sector projects.

The loss of skilled labour to retirement will be the biggest challenge facing the sector over the coming decade. Approximately eight-in-ten job openings over the coming decade will be attributed to retiring workers. Analysis suggests that training and retention of new apprentices will be particularly important for bricklayer, carpenter, mobile crane operator and roofer trades.

The construction sector is projected to require approximately 13,750 new registrants to keep pace with demand requirements over the long-term, assuming completion rates remain at historic levels. While demand is projected to decline after 2025 following the completion of anticipated projects, the industry will need to continue attracting and training apprentices to keep up with rising rates of retirement to sustain workforce certification rates. The table below provides a summary of projected yearly new registrations, program completions, and certification requirements.

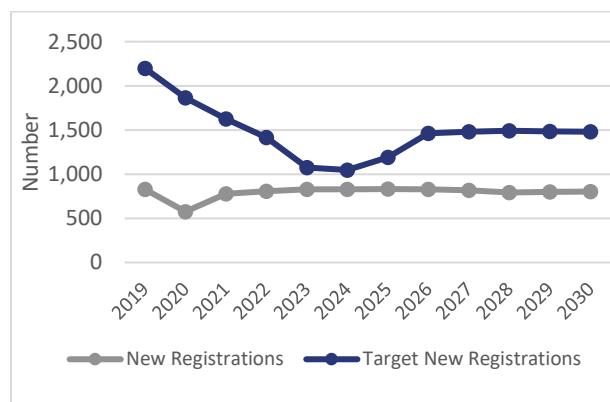
Please note that due to rounding, the numbers in the following data tables may not add up to the totals indicated.

Construction Sector Certification Requirements & Anticipated Completions, 2019 to 2030

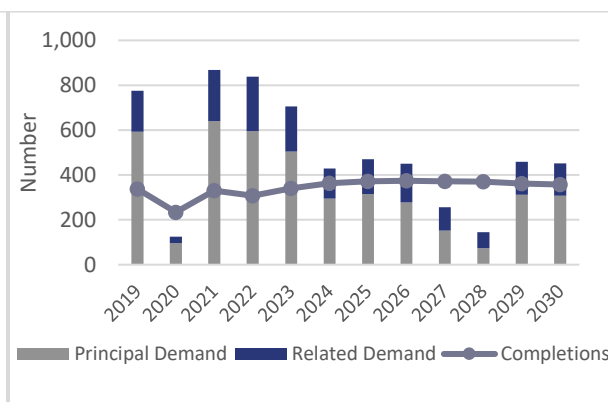
Construction Sector	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	827	576	777	807	829	829	831	807	8,110
Target New Registrations	2,202	1,864	1,632	1,415	1,074	1,048	1,193	1,480	13,754
Completions*	337	234	336	311	334	361	372	367	3,550
Employment									
Certified Workforce	9,248	9,058	9,403	9,698	9,906	9,904	9,924	9,682	
Principal Trade Demand									
Replacement Demand	291	288	294	297	298	294	291	279	2,867
Expansion Demand	302	-190	345	295	208	-2	20	-55	593
Total Principal Demand	593	97	640	595	505	295	314	225	3,472
Related Trade Demand									
Replacement Demand	131	125	133	135	137	135	135	127	1,310
Expansion Demand	52	-99	97	106	63	-3	24	0	288
Total Related Demand	183	27	228	243	201	134	156	128	1,600
Total Demand for Certificate	776	124	868	838	706	429	470	352	5,072

* Average Completion Rate 43%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Bricklayer

Bricklayer is a compulsory trade in Nova Scotia; however, the analysis suggests that only about half (48%) of the workforce is certified. New program registrations have declined in recent years since peaking at 27 in 2012 and are anticipated to average around 15 registrations per year over the coming decade. Assuming the completion rate remains near 30%, program completions are projected to stabilize near 4 certifications per year over the same period.

Although employment growth is anticipated to moderate for bricklayers over the coming decade, retirements will continue to drive demand for recruitment and training for an estimated 100 certified bricklayers over the next decade. Taken together, employment and replacement demand will create nearly 125 potential job openings for certified bricklayers. At current rates of completion this would require an estimated 280 new registrants.

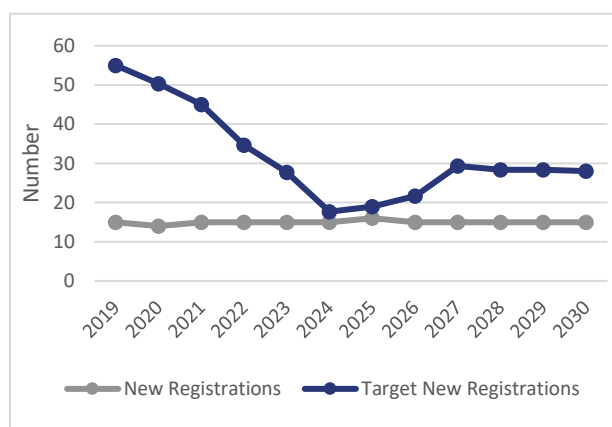
Based on the current projection for new registrations, only 40 new certified bricklayers are expected. The province will likely need to increase the intake of new apprentices, as well as focus on retention over the program duration to meet certification requirements over the next decade.

Bricklayer Certification Requirements & Anticipated Completions, 2019 to 2030

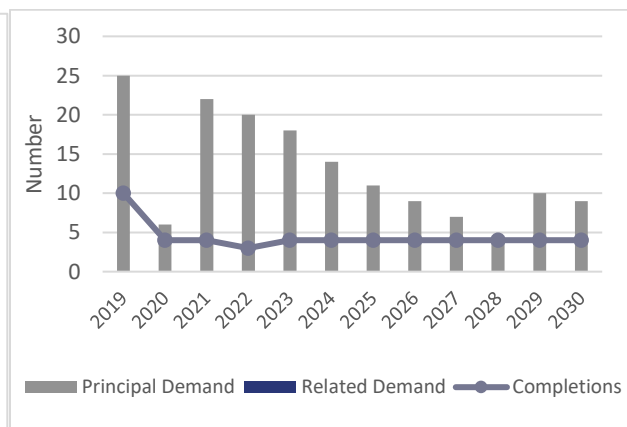
Bricklayer	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	15	14	15	15	15	15	16	15	151
Target New Registrations	55	50	45	35	28	18	19	27	280
Completions*	10	4	4	3	4	4	4	4	39
Employment									
Certified Workforce	283	278	289	298	305	308	309	303	
Principal Trade Demand									
Replacement Demand	11	11	11	11	11	11	10	9	101
Expansion Demand	14	-5	11	9	7	3	1	-1	24
Total Principal Demand	25	6	22	20	18	14	11	8	124
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	25	6	22	20	18	14	11	8	124

* Average Completion Rate 30%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Boilermaker

Boilermaker is a compulsory certified trade and has one of the highest completion rates among apprenticeable trades in Nova Scotia. Unlike most other apprenticeship programs, boilermaker saw a rise in new registrations to the program in 2020, and is likely to see a rise in completions over the near-term.

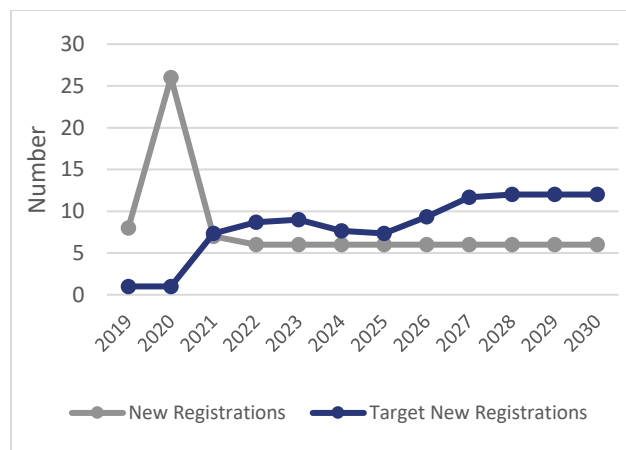
The need to replace retiring workers over the coming decade will be partially met by the slowing in employment growth anticipated over the same period. Based on current economic and demographic assumptions, an estimated 17 newly certified boilermakers will be required to meet demand requirements over the forecast period. The completion of LNG gas decommissioning work and slowing maintenance demands suggests completions may run ahead of near-term workforce certification requirements; however, any increase in employment requirements may pose potential challenges for supply over the long-term.

Boilermaker Certification Requirements & Anticipated Completions, 2019 to 2030

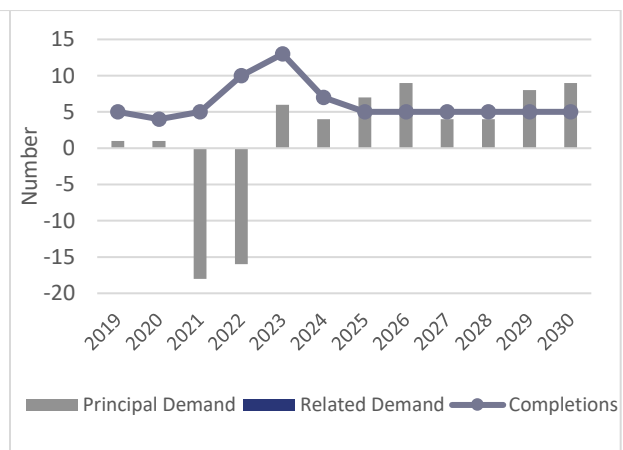
Boilermaker	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	8	26	7	6	6	6	6	6	61
Target New Registrations	0	0	7	9	9	8	7	11	97
Completions*	5	4	5	10	13	7	5	5	65
Employment									
Certified Workforce	366	357	331	307	305	301	300	296	
Principal Trade Demand									
Replacement Demand	11	10	9	8	8	8	8	8	81
Expansion Demand	-11	-9	-26	-24	-2	-4	-1	-1	-62
Total Principal Demand	1	1	-18	-16	6	4	7	7	17
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	1	1	-18	-16	6	4	7	7	17

* Average Completion Rate 70%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Carpenter

Carpenters typically work across many related trades and occupations. Near-term requirements are expected to rise sharply in 2021 and 2022 in line with construction demands. Replacement demand for carpenters and related occupations are a significant contributor to certification requirements over the latter part of the forecast period. Taken together an estimated 2,100 new certified carpenters will be required to sustain the current share of certified carpenters in the labour force.

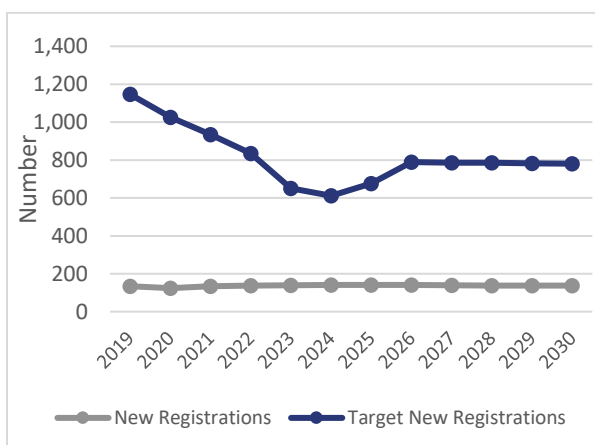
Over the same period, the relatively low rate of program completions suggests the province can anticipate approximately 300 newly certified carpenters. To overcome the projected shortfall, the intake of new apprentices or rates of completion will need to rise to meet certification requirements over the next decade.

Carpenter Certification Requirements & Anticipated Completions, 2019 to 2030

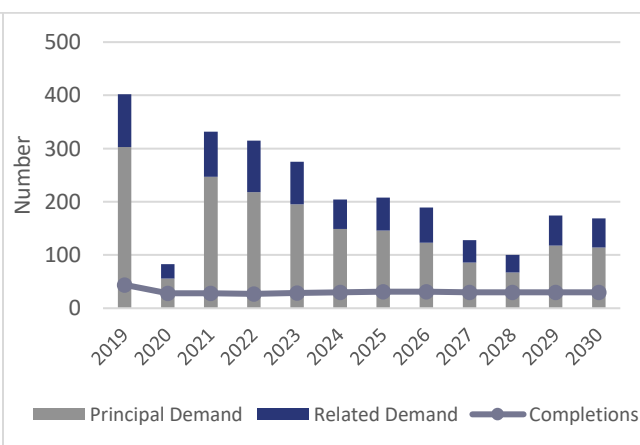
Carpenter	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	134	124	134	137	140	141	141	139	1,388
Target New Registrations	1,146	1,025	935	834	651	611	677	784	7,631
Completions*	44	28	28	27	29	30	31	30	296
Employment									
Certified Workforce	3,278	3,202	3,315	3,399	3,461	3,480	3,498	3,437	
Principal Trade Demand									
Replacement Demand	132	132	134	134	133	130	128	119	1,254
Expansion Demand	170	-76	113	84	62	19	18	-17	209
Total Principal Demand	303	56	247	218	195	149	146	102	1,463
Related Trade Demand									
Replacement Demand	55	54	56	57	57	57	56	54	553
Expansion Demand	44	-26	29	40	23	-2	7	-4	77
Total Related Demand	99	27	85	97	80	55	62	50	631
Total Demand for Certificate	402	83	332	315	275	204	208	152	2,094

* Average Completion Rate 20%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Construction Electrician

Construction electrician is a compulsory trade in Nova Scotia. New registrations saw a notable decline in 2020, following a significant rise in 2019. New registrations are anticipated to rise in the near-term, as the start of major hospital projects contributes to an expected rise in employment demand for electricians between 2021 and 2023. Employment growth is projected to slow in the latter half of the decade as these major projects wind down. Despite the slowing in activity, retiring workers will need to be replaced. The analysis suggests more than 830 additional certified electricians will be required.

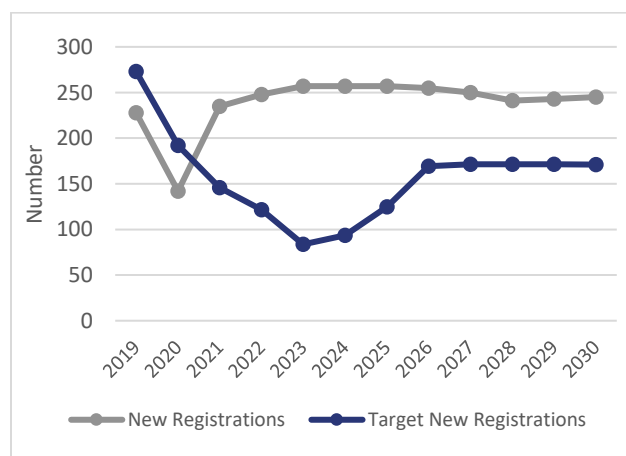
Based on recent registration trends and the historic completion rate for the trade, the current levels of new registrations are likely to meet demand requirements for new journeypersons.

Construction Electrician Certification Requirements & Anticipated Completions, 2019 to 2030

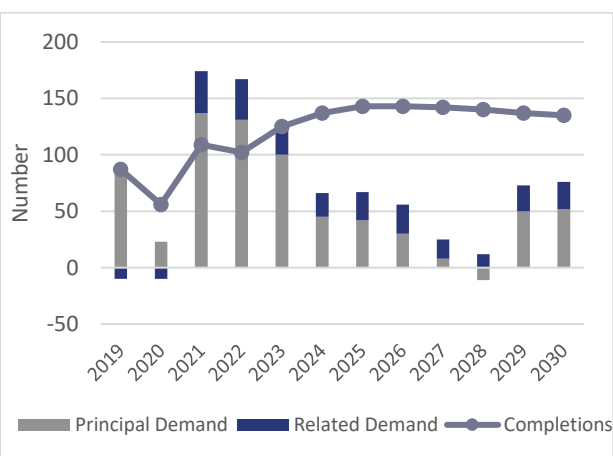
Construction Electrician	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	228	142	235	248	257	257	257	247	2,488
Target New Registrations	273	192	146	122	84	94	125	171	1,424
Completions*	87	56	109	102	125	137	143	139	1,313
Employment									
Certified Workforce	1,443	1,423	1,516	1,603	1,659	1,659	1,658	1,586	
Principal Trade Demand									
Replacement Demand	44	43	43	44	44	44	43	42	427
Expansion Demand	39	-20	93	87	56	0	-1	-16	156
Total Principal Demand	83	23	137	131	100	45	42	26	584
Related Trade Demand									
Replacement Demand	14	12	15	16	16	16	16	15	155
Expansion Demand	-24	-22	22	20	10	5	9	5	92
Total Related Demand	-10	-10	37	36	26	21	25	20	247
Total Demand for Certificate	73	13	174	167	126	66	67	46	831

* Average Completion Rate 55%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Gasfitter (A and B)

Gas Fitter levels *One*, *Two* and *Three* programs were replaced by Gas Fitter A and B in 2017. This transition resulted in a temporary spike in registrations in 2017, before normalizing to around 40 registrations per year.

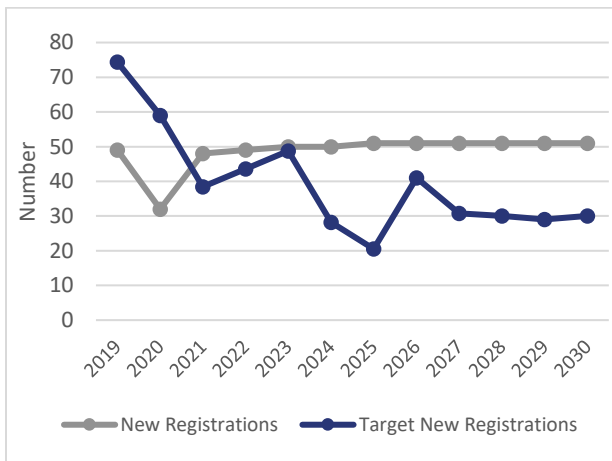
Following a slight decline in 2020, new registrations are expected to return to historic rates for the duration of the outlook period. Based on rate of completion, the current number of annual new registrations are in line with the expected total demand for certified Gas Fitters over the same period.

Gasfitter – A and B Certification Requirements & Anticipated Completions, 2019 to 2030

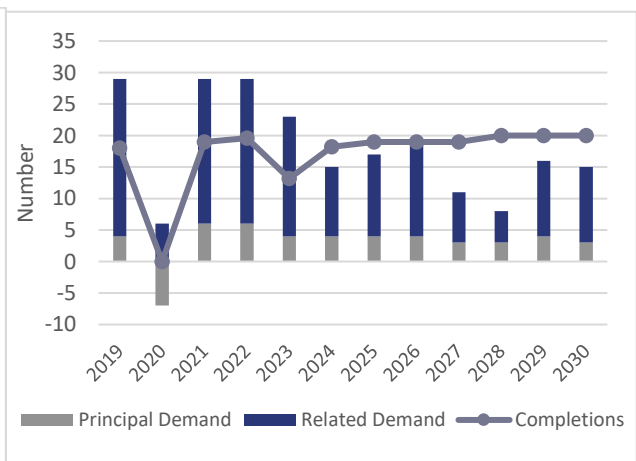
Gasfitter (A & B)	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	49	32	48	49	50	50	51	51	503
Target New Registrations	74	59	38	44	49	28	21	32	340
Completions*	18	0	19	20	13	18	19	20	187
Employment									
Certified Workforce	2,056	2,047	2,050	2,053	2,055	2,056	2,056	2,056	
Principal Trade Demand									
Replacement Demand	2	2	2	3	3	3	3	3	29
Expansion Demand	2	-9	3	3	2	1	0	0	9
Total Principal Demand	4	-7	6	6	4	4	4	3	41
Related Trade Demand									
Replacement Demand	13	13	13	13	13	13	13	12	124
Expansion Demand	12	-7	10	10	5	-2	0	-1	16
Total Related Demand	25	6	23	23	19	11	13	10	141
Total Demand for Certificate	29	-1	29	29	23	15	17	14	182

* Average Completion Rate 39%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Insulator (Heat & Frost)

Insulator is a relatively small voluntary trade in Nova Scotia, with just fewer than half of the workforce being certified (47%). The program saw a spike in new registrations in 2019, followed by a slight decline due to Covid-19. New registrations are not anticipated to return to 2019 peak levels, instead registrations are expected to stabilize near 15 registrations per year over the next decade.

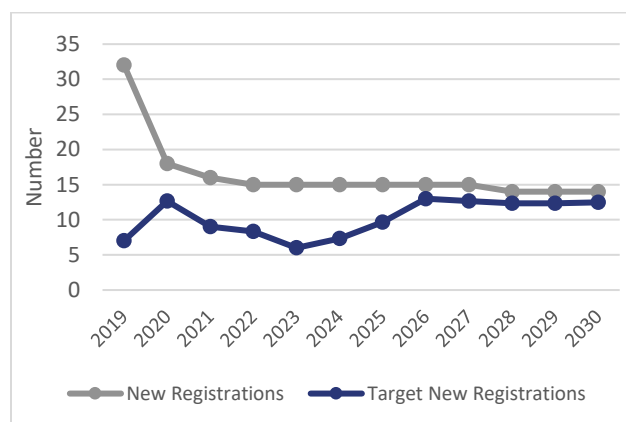
Over the coming decade, certification demand will be almost exclusively driven by the need to replace retiring workers in both the principal trade and related Insulator occupations. While the number of new registrations is low relative to other trades in the sector, the high rate of completion and slow employment growth over the forecast period will likely allow for a sufficient number of certified journeypersons over the next decade.

Insulator Certification Requirements & Anticipated Completions, 2019 to 2030

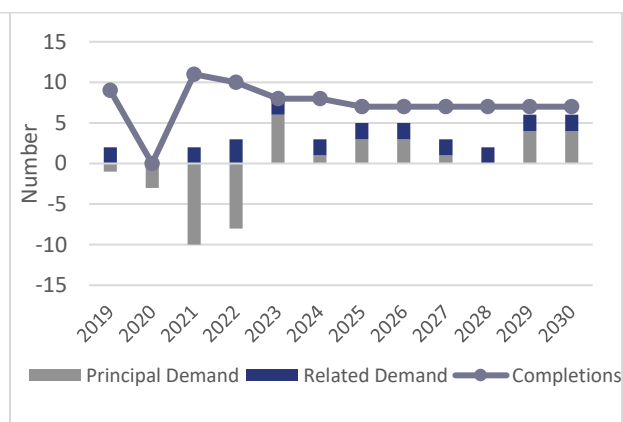
Insulator	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	32	18	16	15	15	15	15	14	148
Target New Registrations	7	13	9	8	6	7	10	13	103
Completions*	9	0	11	10	8	8	7	7	79
Employment									
Certified Workforce	208	202	189	177	180	178	177	172	
Principal Trade Demand									
Replacement Demand	3	3	4	4	3	3	4	4	38
Expansion Demand	-4	-6	-13	-12	3	-2	-1	-1	-32
Total Principal Demand	-1	-3	-10	-8	6	1	3	2	4
Related Trade Demand									
Replacement Demand	1	1	1	1	2	1	2	2	17
Expansion Demand	1	-1	1	1	1	0	1	0	4
Total Related Demand	2	0	2	3	2	2	2	2	21
Total Demand for Certificate	1	-3	-8	-5	8	3	5	4	25

* Average Completion Rate 50%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Ironworker – Structural

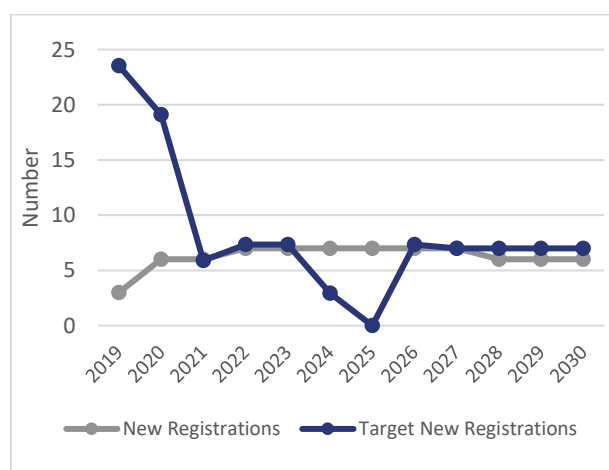
Ironworker (structural) is a red seal trade in Nova Scotia. New registrations for this trade have been trending downwards since a peak in 2016. Over the forecast period, new registrations are anticipated to stabilize near 6 registrations per year, a slightly lower level than needed to keep pace with demand requirements. Despite a higher-than-average completion rate for the sector, the number of certified Ironworkers is expected to fall slightly short of the 67 journeypersons required to meet demand over the next decade, particularly over the near-term.

Ironworker - Structural Certification Requirements & Anticipated Completions, 2019 to 2030

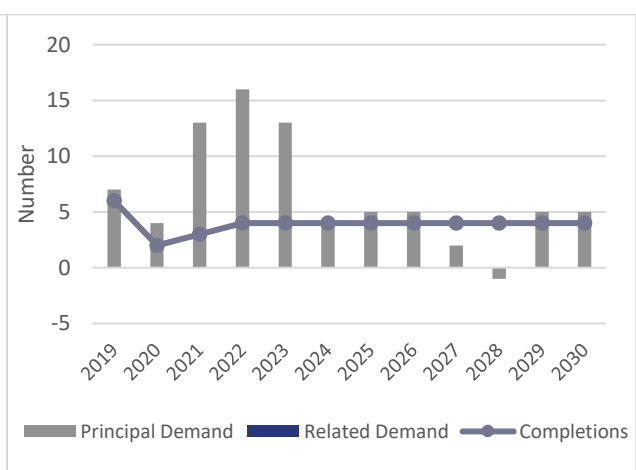
Ironworker - Structural	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	3	6	6	7	7	7	7	6	66
Target New Registrations	27	17	11	7	6	3	3	7	59
Completions*	6	2	3	4	4	4	4	4	39
Employment									
Certified Workforce	205	204	212	222	230	229	228	221	
Principal Trade Demand									
Replacement Demand	5	5	5	5	6	6	6	5	54
Expansion Demand	2	-1	8	10	8	-1	-1	-2	13
Total Principal Demand	7	4	13	16	13	4	5	3	67
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	7	4	13	16	13	4	5	3	67

* Average Completion Rate 66%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Ironworker – Reinforcing

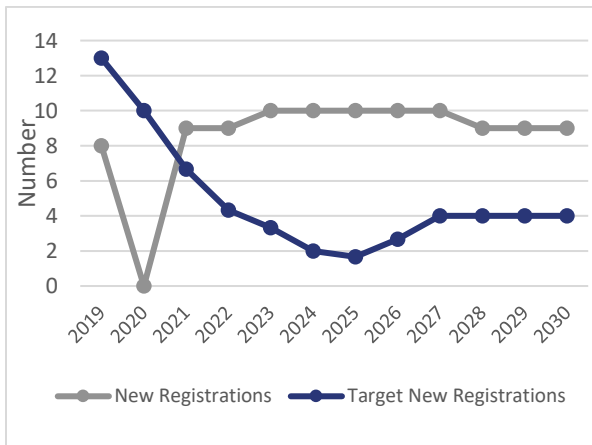
Certification demand for Ironworkers (reinforcing) will be almost exclusively driven by the need to replace retiring workers. While the number of new registrations is low relative to other trades in the sector, the slow employment growth over the forecast period will allow for a sufficient number of certified journeypersons over the next decade.

Ironworker - Reinforcing Certification Requirements & Anticipated Completions, 2019 to 2030

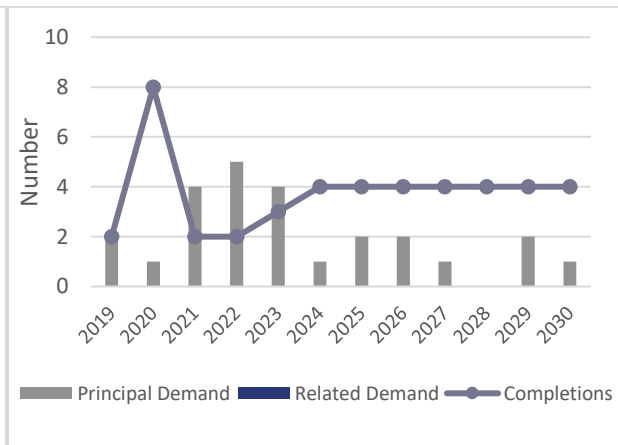
Ironworker - Reinforcing	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	8	0	9	9	10	10	10	9	95
Target New Registrations	13	10	7	4	3	2	2	4	37
Completions*	2	8	2	2	3	4	4	4	34
Employment									
Certified Workforce	68	68	71	74	77	77	77	75	
Principal Trade Demand									
Replacement Demand	2	2	2	2	2	2	2	2	20
Expansion Demand	1	0	3	3	3	0	0	-1	6
Total Principal Demand	2	1	4	5	4	1	2	1	23
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	2	1	4	5	4	1	2	1	23

* Average Completion Rate 38%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Mobile Crane Operator

New registrations peaked at 49 in 2013 and have been gradually falling since. Over the forecast period, new registrations are anticipated to remain near 10 registrations per year. The trade’s relatively low completion rate translates to few completing apprentices.

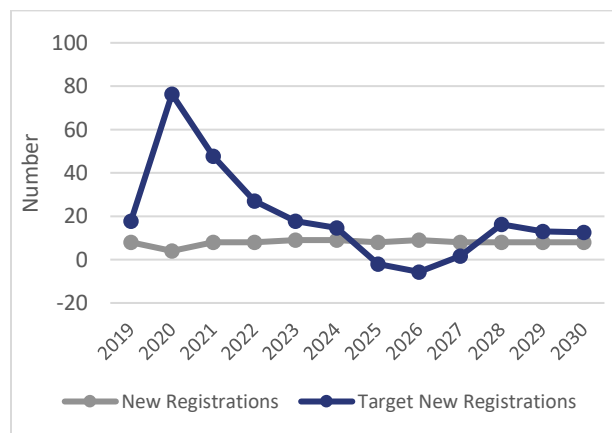
Employment growth over the forecast period will require few new journeypersons to meet demand requirements, particularly in the latter half of the decade as employment slows. Retirements will be the dominant driver for recruitment over the coming decade, creating approximately 75 potential job openings for mobile crane operators and related trades. In total, employers will likely need to train over 140 new certified journeypersons over the next decade to keep pace with employment and replacement demand. Based on the current projected trend, the fewer than 20 anticipated completions will likely fall short of the required number to meet certification requirements over the forecast period.

Mobile Crane Operator Certification Requirements & Anticipated Completions, 2019 to 2030

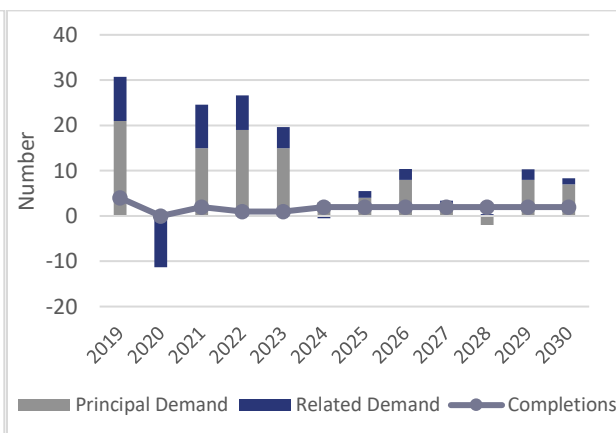
Mobile Crane Operator	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	8	4	8	8	9	9	8	8	83
Target New Registrations	18	76	48	27	18	15	0	8	143
Completions*	4	0	2	1	1	2	2	2	18
Employment									
Certified Workforce	246	241	249	262	270	266	264	255	
Principal Trade Demand									
Replacement Demand	6	6	6	6	6	6	6	6	60
Expansion Demand	15	-5	8	13	8	-4	-2	-2	12
Total Principal Demand	21	1	15	19	15	3	4	5	79
Related Trade Demand									
Replacement Demand	2	2	2	2	2	2	2	1	15
Expansion Demand	8	-13	8	6	3	-2	0	0	16
Total Related Demand	10	-11	10	8	5	-1	2	2	31
Total Demand for Certificate	31	-10	25	27	20	3	6	6	110

* Average Completion Rate 21%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Plumber

Plumber is a compulsory certified trade in Nova Scotia, but journeypersons work across a large number of related traders and occupations. Annual new registrations have risen to about 120 per year in recent years and are anticipated to be sustained at these levels leading to the certification of 40 to 50 new journeypersons per year over the forecast period.

Employment demand is projected to see significant growth in the near-term as construction commences on several hospital projects. Rising rates of retirement will be the dominant driver for recruitment over the coming decade, with an estimated 350 certified journeypersons expected to leave the workforce. The total certification requirement is estimated at 458.

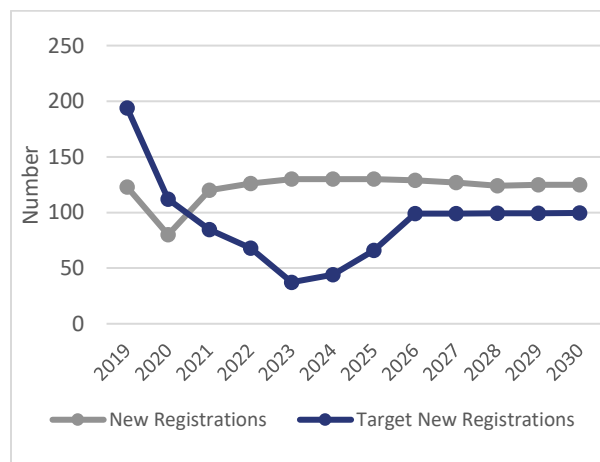
Based on the current projected trend, anticipated new registrations are expected to be sufficient to meet demand requirements over the next decade.

Plumber Certification Requirements & Anticipated Completions, 2019 to 2030

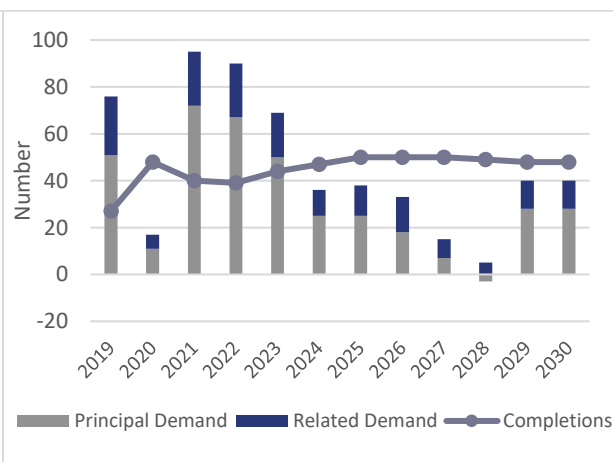
Plumber	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	123	80	120	126	130	130	130	126	1,266
Target New Registrations	194	112	85	68	37	44	66	99	796
Completions*	27	48	40	39	44	47	50	49	465
Employment									
Certified Workforce	840	830	880	924	951	952	953	921	
Principal Trade Demand									
Replacement Demand	21	21	22	22	23	23	23	22	225
Expansion Demand	30	-10	50	44	27	1	1	-7	89
Total Principal Demand	51	11	72	67	50	25	25	16	317
Related Trade Demand									
Replacement Demand	13	13	13	13	13	13	13	12	124
Expansion Demand	12	-7	10	10	5	-2	0	-1	16
Total Related Demand	25	6	23	23	19	11	13	10	141
Total Demand for Certificate	76	17	95	90	69	36	38	26	458

* Average Completion Rate 38%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Oil & Heat Technician

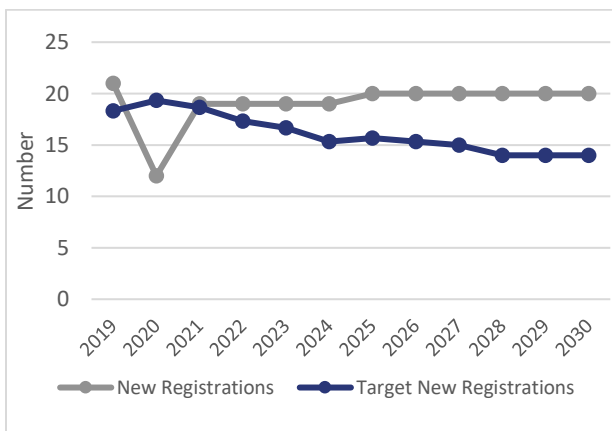
Oil Heat System Technician is a compulsory certified trade in Nova Scotia. New registrations increased to about 30 in the Oil Heat System Technician program in 2017 but have stabilized near 20 registrations per year in recent years. Assuming registrations are sustained at current levels, the number of newly certified journeypersons is expected to average just under 10 per year over the next decade. This is inline with the annual number of new certifications required to sustain demand requirements.

Oil & Heat Tech Certification Requirements & Anticipated Completions, 2019 to 2030

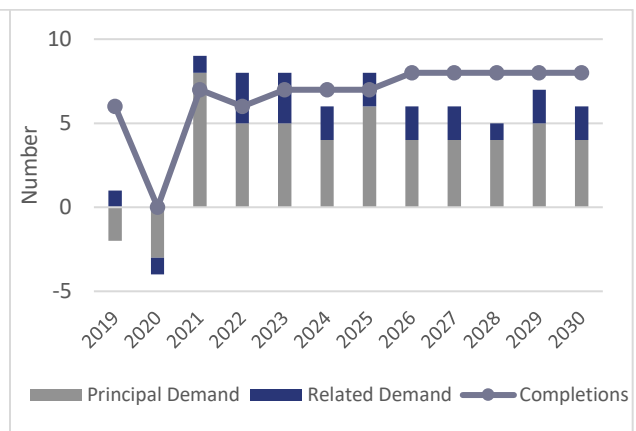
Oil & Heat Technician	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	21	12	19	19	19	19	20	20	196
Target New Registrations	18	19	19	17	17	15	16	14	156
Completions*	6	0	7	6	7	7	7	8	74
Employment									
Certified Workforce	164	159	164	166	167	167	169	171	
Principal Trade Demand									
Replacement Demand	3	2	3	4	4	4	4	4	38
Expansion Demand	-5	-5	5	2	1	0	2	1	11
Total Principal Demand	-2	-3	8	5	5	4	6	4	49
Related Trade Demand									
Replacement Demand	2	1	2	2	2	2	2	2	19
Expansion Demand	-1	-3	0	1	1	0	0	0	2
Total Related Demand	1	-1	1	3	3	2	2	2	20
Total Demand for Certificate	-1	-4	9	8	8	6	8	6	69

* Average Completion Rate 39%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Powerline Technician

Powerline Technician has a high certification rate, despite not being a compulsory trade. Over the coming decade, new registrations are projected to experience minimal growth, in line with slowing employment growth, particularly from 2023 through to 2024. Consequently, program completions are forecast to see minimal growth, averaging just under 10 completions per year over the next decade.

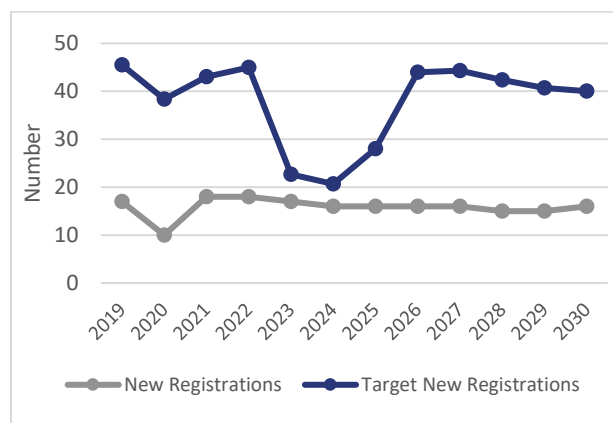
Over the coming decade, retirements will continue to drive recruitment requirements for certified workers. While slow growth is projected for the outlook period, the commencement of construction on multiple utility projects will lead to a moderate number of new positions for Powerline Technicians in 2021. Assuming recent rates of completion, it is estimated that more than 370 new registrations would be required to sustain workforce certification rates over the next decade. Based on the current projection, the 163 estimated new registrants will likely fall short of the demand requirements for newly certified journeypersons.

Powerline Technician Certification Requirements & Anticipated Completions, 2019 to 2030

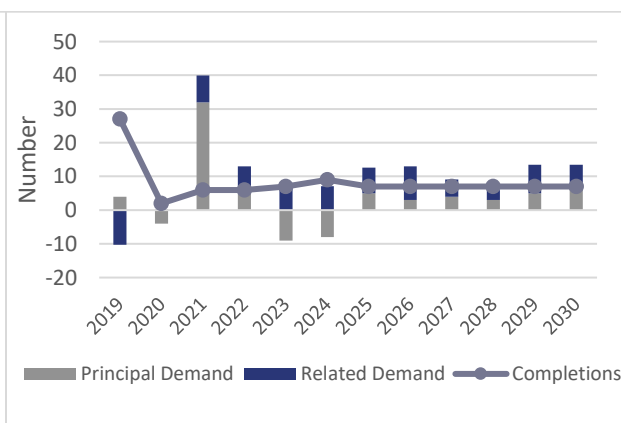
Powerline Technician	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	17	10	18	18	17	16	16	16	163
Target New Registrations	46	38	43	45	23	21	28	42	371
Completions*	27	2	6	6	7	9	7	7	70
Employment									
Certified Workforce	220	211	238	237	222	209	209	205	
Principal Trade Demand									
Replacement Demand	5	5	5	6	6	5	5	5	52
Expansion Demand	-1	-9	27	-1	-15	-13	0	-1	-6
Total Principal Demand	4	-4	32	5	-9	-8	5	4	46
Related Trade Demand									
Replacement Demand	4	4	5	5	5	5	5	5	46
Expansion Demand	-15	-4	3	3	2	3	3	2	26
Total Related Demand	-10	0	8	8	7	7	8	7	72
Total Demand for Certificate	-6	-4	40	13	-2	-1	13	11	118

* Average Completion Rate 45%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Refrigeration and Air Conditioning Mechanic

Refrigeration and Air Conditioning Mechanic is a compulsory trade in Nova Scotia, with the highest completion rate across sectors. New registrations peaked in 2019, before experiencing an approximate 50% decline in 2020 due to the impact of Covid-19 on registration levels. New registrations are anticipated to rise over the near-term but remain below peak levels in line with slower employment growth following 2024.

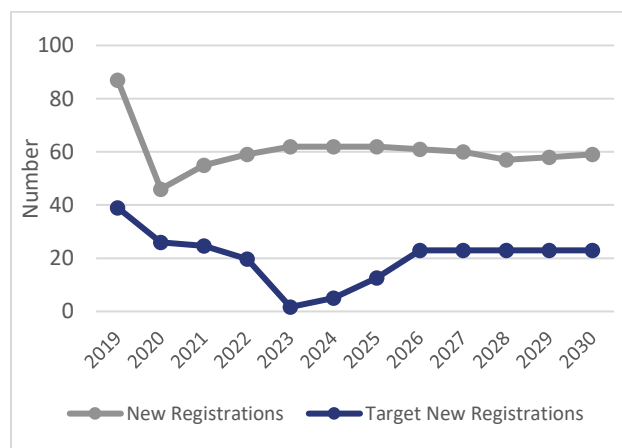
Employment demand will play an integral role in the need for additional recruitment, particularly in the near-term. Based on demographic and economic assumptions, and recent rates of completion, approximately 180 new registrations would be required over the forecast period to keep pace with certification requirements over the long-term. Due to the high completion rate, the projected trend in new registrations suggests the number of program completions will likely run ahead of certification requirements over the latter half of coming decade. This may result in a decline in new registrations.

Refrigeration & A/C Mechanic Certification Requirements & Anticipated Completions, 2019 to 2030

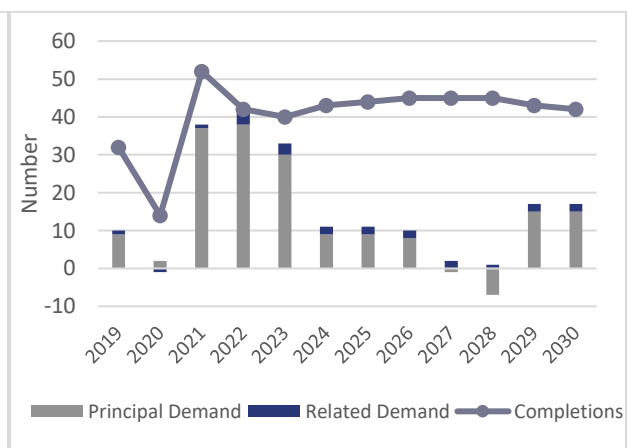
Refrigeration & A/C	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	87	46	55	59	62	62	62	59	595
Target New Registrations	39	26	15	10	2	5	13	23	179
Completions*	32	14	52	42	40	43	44	44	441
Employment									
Certified Workforce	353	346	373	402	422	420	419	401	
Principal Trade Demand									
Replacement Demand	9	9	9	9	10	10	10	10	98
Expansion Demand	1	-7	27	29	20	-2	-1	-4	53
Total Principal Demand	9	2	37	38	30	9	9	6	153
Related Trade Demand									
Replacement Demand	2	1	2	2	2	2	2	2	19
Expansion Demand	-1	-3	0	1	1	0	0	0	2
Total Related Demand	1	-1	1	3	3	2	2	2	20
Total Demand for Certificate	10	1	38	41	33	11	11	8	173

* Average Completion Rate 73%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Rofer

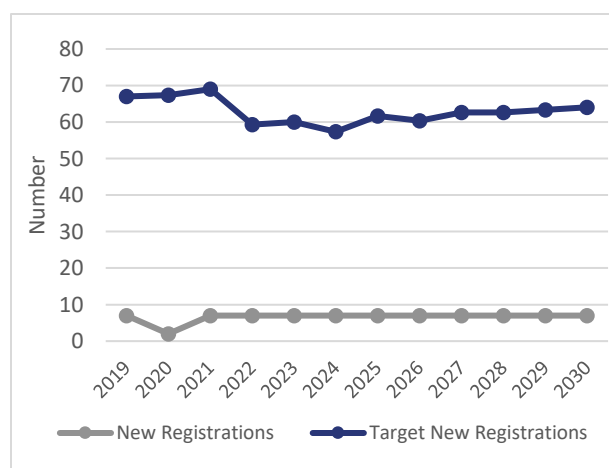
Employment growth over the forecast period will require fewer new journeypersons to meet demand requirements, particularly over the latter half of the decade as employment slows. Retirements will remain the dominant driver of recruitment over the coming decade, creating approximately 140 potential job openings. The industry will need to recruit an estimated 620 new registrants over the next decade to keep pace with employment and replacement demand over the long-term. Based on the current projected trend, new registrations will likely fall short of the required number to meet certification requirements. Increasing the retention of apprentices will drastically lower the target number of new registrations needed to meet demand requirements.

Rofer Certification Requirements & Anticipated Completions, 2019 to 2030

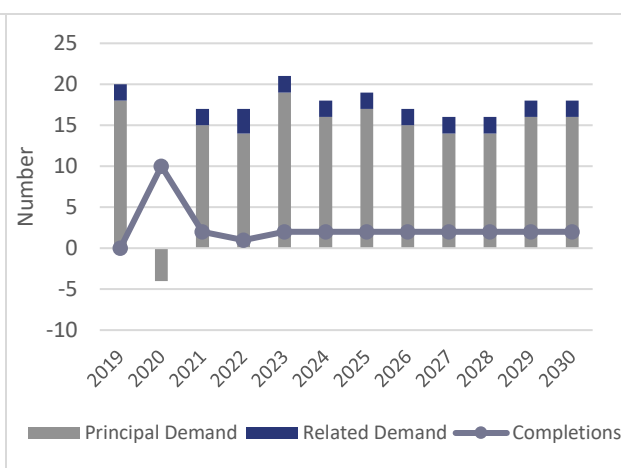
Rofer	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	7	2	7	7	7	7	7	7	70
Target New Registrations	67	67	69	59	60	57	62	63	620
Completions*	0	10	2	1	2	2	2	2	19
Employment									
Certified Workforce	521	507	511	513	521	525	529	535	
Principal Trade Demand									
Replacement Demand	10	10	11	11	11	12	12	13	122
Expansion Demand	8	-14	4	2	8	4	4	2	32
Total Principal Demand	18	-4	15	14	19	16	17	15	156
Related Trade Demand									
Replacement Demand	1	1	1	1	2	1	2	2	17
Expansion Demand	1	-1	1	1	1	0	1	0	4
Total Related Demand	2	0	2	3	2	2	2	2	21
Total Demand for Certificate	20	-4	17	17	21	18	19	17	177

* Average Completion Rate 29%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Sheet Metal Worker

Sheet Metal Worker is a compulsory certified trade in Nova Scotia. New registrations declined by nearly 50% in 2020 due to impact of Covid-19 on registration levels. Annual new registrations in this trade are anticipated to hover just under 40 per year over the forecast period.

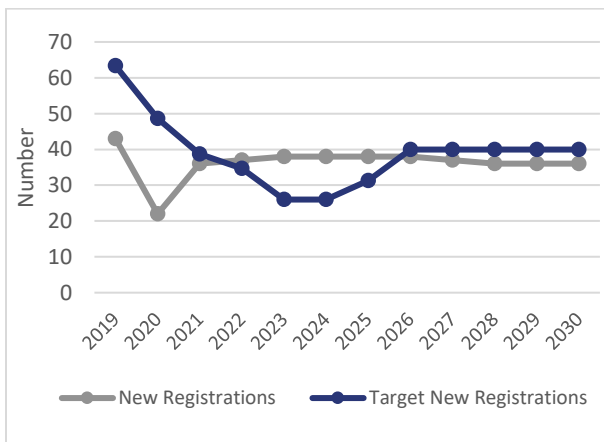
Demand is forecast to be driven primarily by replacement of retiring workers and general workforce attrition over the coming decade, while employment demand will be an important driver for recruitment in the near-term. Recruitment for related occupations is forecast to play an integral role in the need for additional certified journeypersons. Over the coming decade, more than 350 new registrations are required to keep pace with certification requirements over the long-term. Based on the current projected trend, anticipated new registrations are expected to be sufficient to meet demand requirements over the next decade.

Sheet Metal Worker Certification Requirements & Anticipated Completions, 2019 to 2030

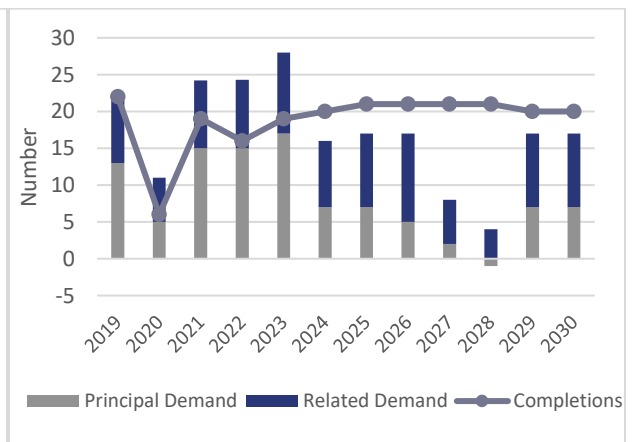
Sheet Metal Worker	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	43	22	36	37	38	38	38	37	370
Target New Registrations	63	49	39	35	26	26	31	40	357
Completions*	22	6	19	16	19	20	21	21	198
Employment									
Certified Workforce	289	287	295	303	312	311	311	301	
Principal Trade Demand									
Replacement Demand	7	7	8	8	8	7	7	7	73
Expansion Demand	6	-2	8	8	9	-1	0	-3	11
Total Principal Demand	13	5	15	15	17	7	7	4	81
Related Trade Demand									
Replacement Demand	8	7	8	8	8	8	7	7	74
Expansion Demand	1	-1	1	1	3	1	3	1	17
Total Related Demand	9	6	9	9	11	9	10	8	91
Total Demand for Certificate	22	11	24	24	28	16	17	12	172

* Average Completion Rate 55%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Sprinkler Fitter

Sprinkler Fitter is a small trade in Nova Scotia, with fewer than 100 certified workers in the province. Assuming the completion rate persists at historic levels, new registrations are forecast to remain near 15 registrations per year, while completions are expected to remain near 8 completions per year over the coming decade.

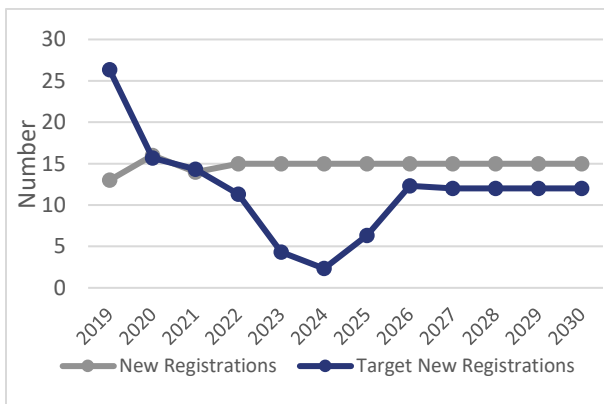
Employment growth is projected to rise slightly over the near-term in line with increased construction and utility activity, before slowing again in the latter part of the decade. Anticipated retirements alone will result in the need for approximately 44 newly certified Sprinkler Fitters to sustain the current workforce. Over the coming decade, nearly 100 new registrants are required to meet long-term certification requirements. Given the current levels of registrations for this program, the province will likely have enough certified journeypersons to keep pace with certification requirements over the forecast period.

Sprinkler Fitter Certification Requirements & Anticipated Completions, 2019 to 2030

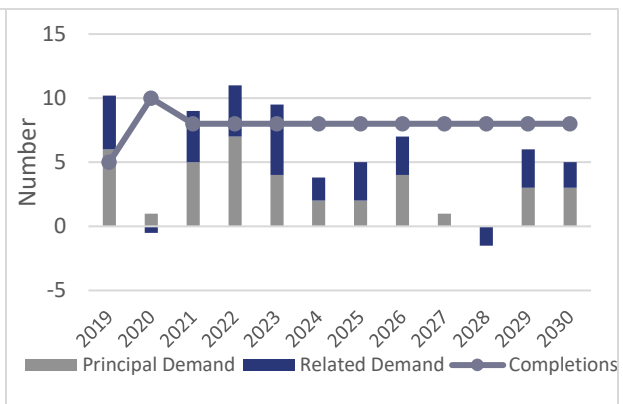
Sprinkler Fitter	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	13	16	14	15	15	15	15	15	149
Target New Registrations	26	16	14	11	4	2	6	12	99
Completions*	5	10	8	8	8	8	8	8	80
Employment									
Certified Workforce	73	72	75	79	80	80	80	80	
Principal Trade Demand									
Replacement Demand	2	2	2	2	2	2	2	2	20
Expansion Demand	4	-1	3	4	1	0	0	0	8
Total Principal Demand	6	1	5	7	4	2	2	2	31
Related Trade Demand									
Replacement Demand	3	3	3	3	3	3	3	2	24
Expansion Demand	1	-4	1	1	3	-1	0	-1	1
Total Related Demand	4	-1	4	4	6	2	3	1	25
Total Demand for Certificate	10	1	9	11	10	4	5	4	56

* Average Completion Rate 55%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Steamfitter/Pipefitter

New registrations for this program have been on the decline since a peak of 131 in 2012. Over the forecast period, new registrations are anticipated to return to 2019 levels, following a slight decline in 2020 due to lower levels of registrations as COVID-19 emerged.

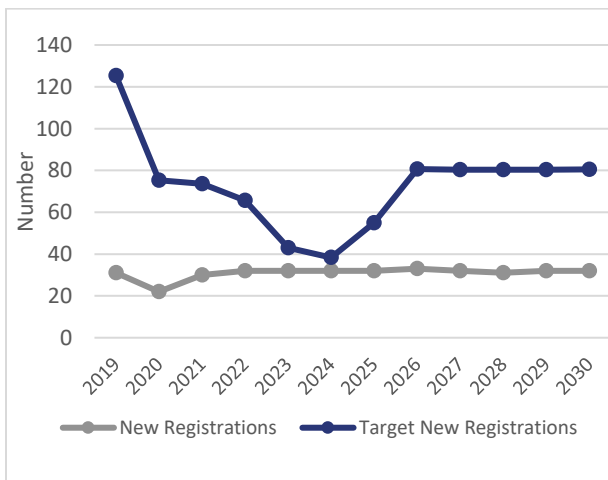
Similar to Sprinkler Fitter, employment growth for this trade is projected to pick up in the near-term, before slowing again in the latter part of the decade. Anticipated retirements will result in the need for approximately 299 newly certified Steamfitters/Pipefitters in principal and related occupations to sustain the current workforce. Over the coming decade, nearly 680 new registrants are likely to be required to meet long-term demand requirements. Given the relatively low annual number (32) of new registrations for this program, increased recruitment and retention is likely necessary to keep pace with certification requirements over the forecast period.

Steamfitter/Pipefitter Certification Requirements & Anticipated Completions, 2019 to 2030

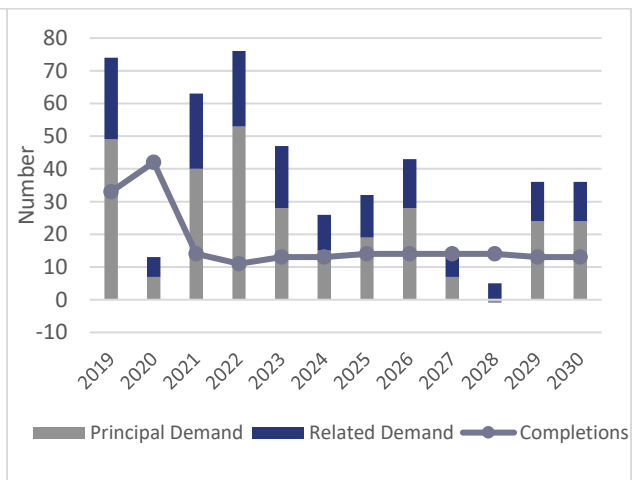
Steamfitter/Pipefitter	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	31	22	30	32	32	32	32	32	318
Target New Registrations	125	75	74	66	43	38	55	80	678
Completions*	33	42	14	11	13	13	14	14	133
Employment									
Certified Workforce	565	554	575	609	619	616	617	612	
Principal Trade Demand									
Replacement Demand	18	18	18	18	18	18	18	17	175
Expansion Demand	31	-11	21	34	10	-3	1	-1	58
Total Principal Demand	49	7	40	53	28	15	19	16	237
Related Trade Demand									
Replacement Demand	13	13	13	13	13	13	13	12	124
Expansion Demand	12	-7	10	10	5	-2	0	-1	16
Total Related Demand	25	6	23	23	19	11	13	10	141
Total Demand for Certificate	74	13	63	76	47	26	32	27	378

* Average Completion Rate 42%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030





Industrial/Manufacturing Sector

New registrations in the industrial/manufacturing sectors are anticipated to experience a decline of -31% (72 fewer new registrations) in 2020. The analysis suggests the industry will need to recruit more than 3,920 new registrants over the forecast period to keep pace with the anticipated growth in exports and demand related to the Federal shipbuilding program over the latter half of the decade. Demand for certification will be driven primarily by the continued rise in retirements over the forecast period, creating 1,890 potential job openings over the next decade. Employment growth is projected to account for 14% of demand requirements over the next decade, totaling 308 potential job openings.

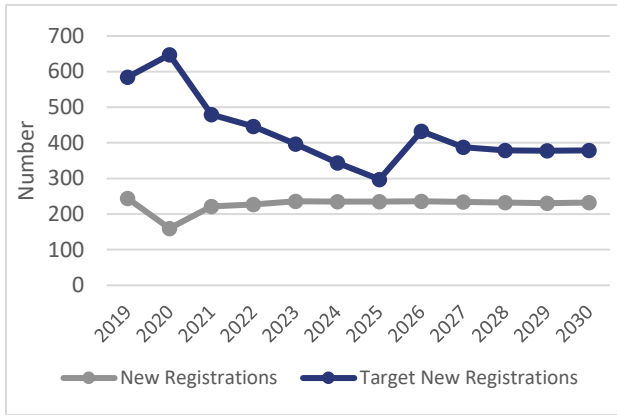
The industry will likely need to increase intake of program new registrations and/or increase the rate of program completion within the sector to keep pace with projected demand requirements over the forecast period, particularly for machinist and industrial electrician trade programs. The table below provides a summary of projected yearly new registrations, program completions, and certification requirements.

Industrial/Manufacturing Sector Certification Requirements & Anticipated Completions, 2019 to 2030

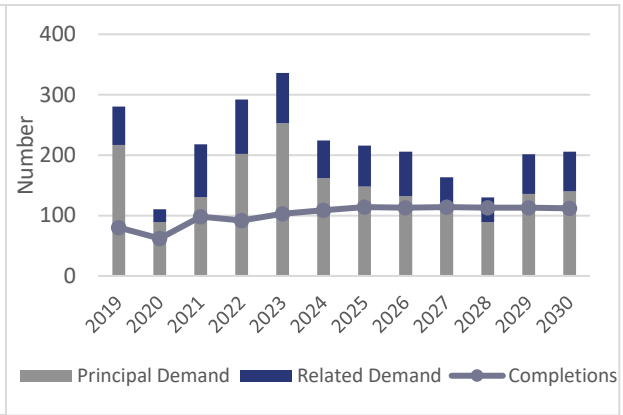
Industrial/Mfg Sector	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	244	160	222	227	236	235	235	233	2,320
Target New Registrations	584	647	479	446	397	344	298	391	3,921
Completions*	80	62	98	92	103	109	114	113	1,081
Employment									
Certified Workforce	4,360	4,309	4,305	4,366	4,481	4,504	4,516	4,467	
Principal Trade Demand									
Replacement Demand	135	142	137	140	139	138	138	132	1,353
Expansion Demand	82	-51	-4	61	115	23	12	-10	159
Total Principal Demand	217	89	131	202	253	162	148	122	1,506
Related Trade Demand									
Replacement Demand	55	50	56	56	56	56	53	53	538
Expansion Demand	8	-29	32	35	27	7	13	7	149
Total Related Demand	64	21	87	90	83	62	68	59	686
Total Demand for Certificate	280	110	218	292	336	224	216	181	2,192

* Average Completion Rate 40%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Boat Builder

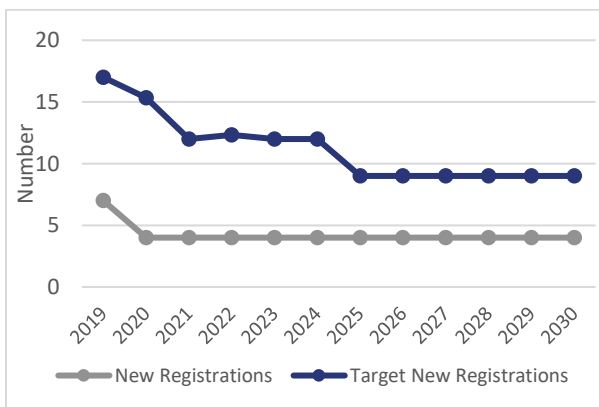
Boat Builder is a small trade in Nova Scotia, with fewer than 10 new registrants per year over the past decade. The small numbers of the forecast and analysis should be interpreted with caution. Assuming new registrations are sustained at projected levels, the province would have to nearly double the number of new registrants over the forecast period to meet certification requirements, which are driven almost exclusively by the need to replace retiring workers.

Boat Builder Certification Requirements & Anticipated Completions, 2019 to 2030

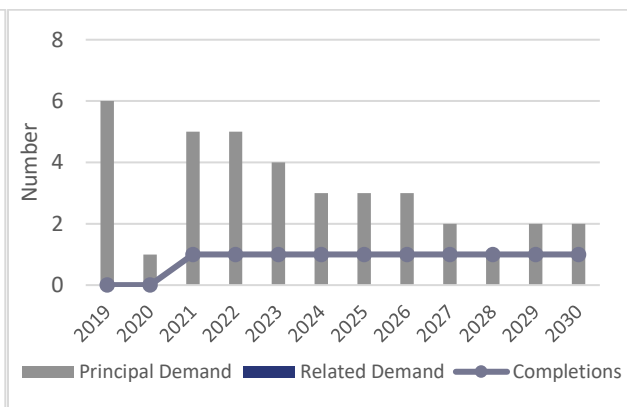
Boat Builder	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	7	4	4	4	4	4	4	4	40
Target New Registrations	17	15	12	12	12	12	9	9	102
Completions*	0	0	1	1	1	1	1	1	10
Employment									
Certified Workforce	68	66	68	70	71	71	71	70	
Principal Trade Demand									
Replacement Demand	3	3	3	3	3	3	3	2	27
Expansion Demand	4	-2	2	2	1	0	0	0	3
Total Principal Demand	6	1	5	5	4	3	3	2	30
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	6	1	5	5	4	3	3	2	30

* Average Completion Rate 23%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Industrial Electrician

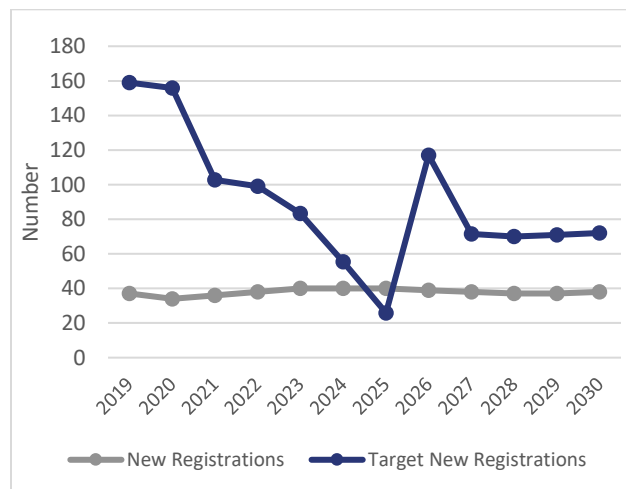
Industrial Electrician new registrations have declined in recent years after reaching peak levels of nearly 100 in 2012. New registrations have stabilized around 30 to 40 registrations per year since 2017, a trend anticipated to continue over the coming decade. Completions are expected to remain around 15 per year over the next 10 years, or just under 150 in total. Rapidly rising retirements over the same period are expected to sustain pressure on hiring, and the need to train and certify an additional 360 or so journeypersons to meet certification requirements. Assuming program completion rates remain below 40%, the analysis suggests a risk of a prolonged period of certification requirements exceeding the number of program completions. The low number of trade qualifiers per year are unlikely to bridge the potential gap in supply over the forecast period.

Industrial Electrician Certification Requirements & Anticipated Completions, 2019 to 2030

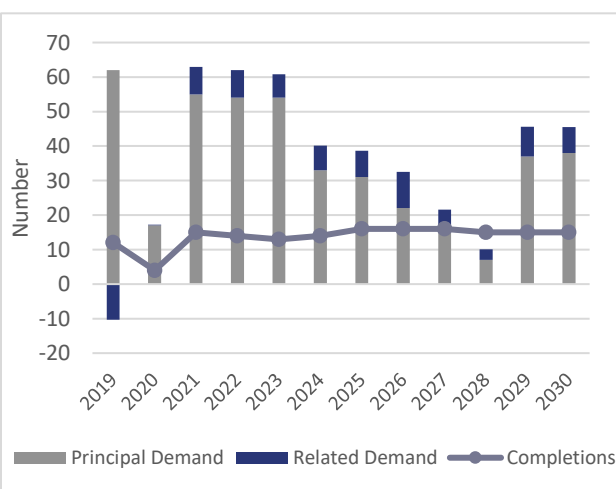
Industrial Electrician	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	37	34	36	38	40	40	40	38	383
Target New Registrations	159	156	103	99	83	55	26	80	768
Completions*	12	4	15	14	13	14	16	15	149
Employment									
Certified Workforce	1,071	1,056	1,079	1,100	1,121	1,121	1,120	1,085	
Principal Trade Demand									
Replacement Demand	33	32	32	33	33	33	32	31	317
Expansion Demand	29	-15	23	21	21	0	-1	-7	30
Total Principal Demand	62	17	55	54	54	33	31	24	347
Related Trade Demand									
Replacement Demand	4	4	5	5	5	5	5	5	46
Expansion Demand	-15	-4	3	3	2	3	3	3	27
Total Related Demand	-10	0	8	8	7	7	8	7	73
Total Demand for Certificate	52	17	63	62	61	40	39	31	420

* Average Completion Rate 39%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Industrial Millwright

New registrations have been on the rise over the past decade, reaching a peak of 47 in 2017. Over the forecast period, new registrations are projected to remain near 40 registrations per year. Over the next decade, replacement for retiring workers and general workforce attrition will be the driving force for recruitment. Employment growth will also contribute significantly to recruitment requirements, particularly in 2023 and 2024. Taken together, expansion and replacement demands are projected to drive demand for just over 400 additional certified industrial millwrights over the coming decade.

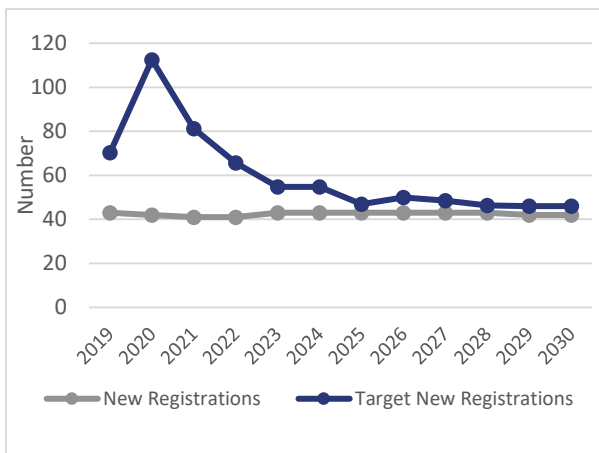
Assuming program completions persist at their current rate, the projected trend in new registrations will result in 273 completions over the decade, which is likely to be insufficient to meet the expected certification requirements.

Industrial Millwright Certification Requirements & Anticipated Completions, 2019 to 2030

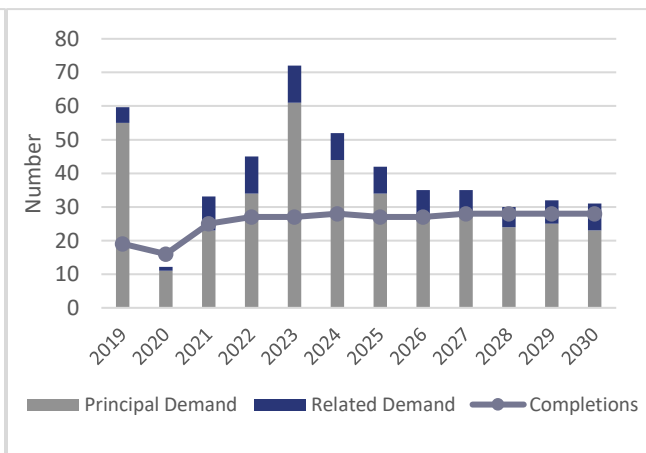
Industrial Millwright	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	43	42	41	41	43	43	43	43	424
Target New Registrations	70	113	81	66	55	55	47	47	540
Completions*	19	16	25	27	27	28	27	28	273
Employment									
Certified Workforce	933	909	897	896	923	933	934	921	
Principal Trade Demand									
Replacement Demand	36	36	36	35	34	33	33	31	324
Expansion Demand	19	-24	-12	-1	27	10	1	-5	2
Total Principal Demand	55	11	23	34	61	44	34	26	324
Related Trade Demand									
Replacement Demand	7	5	7	7	7	7	7	7	70
Expansion Demand	-2	-4	3	4	4	1	1	0	15
Total Related Demand	5	1	10	11	11	8	8	7	83
Total Demand for Certificate	60	12	33	45	72	52	42	33	407

* Average Completion Rate 64%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Industrial Instrumental Control Technician

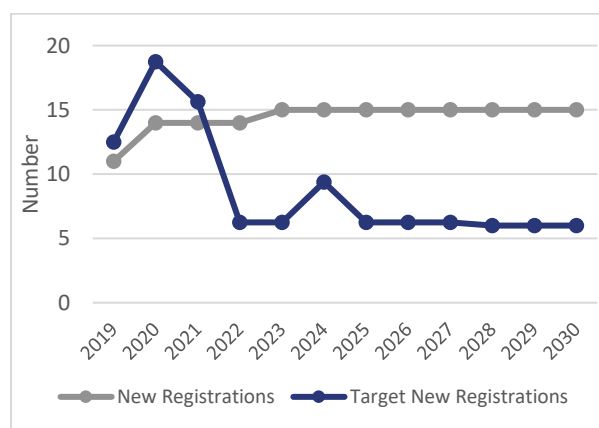
Minimal growth is anticipated for this trade over the forecast period. Retirements will drive the need for continued recruitment, creating approximately 30 job openings over the next decade. Based on the current completion rate and level of registrations reported, there will likely be an adequate number of newly certified Instrumental control technicians to keep pace with demand requirements over the coming decade.

Instrumental Control Tech Certification Requirements & Anticipated Completions, 2019 to 2030

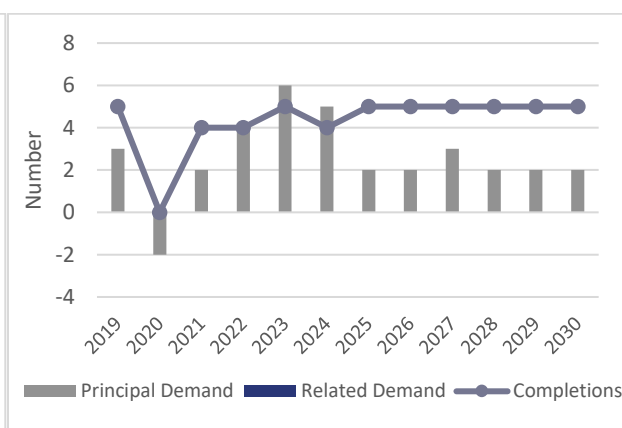
Instrumental Control Tech	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	11	14	14	14	15	15	15	15	148
Target New Registrations	13	19	16	6	6	9	6	6	74
Completions*	5	0	4	4	5	4	5	5	47
Employment									
Certified Workforce	75	71	71	72	75	77	77	77	
Principal Trade Demand									
Replacement Demand	3	3	3	3	3	3	3	3	30
Expansion Demand	0	-4	0	1	3	2	0	0	5
Total Principal Demand	3	-2	2	4	6	5	2	2	30
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	3	-2	2	4	6	5	2	2	30

* Average Completion Rate 32%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Machinist

The trade program saw a significant drop in new registrations in 2020. Over the near term, new registrations are anticipated to return to historic levels. Apprentices that delayed program completion in 2020 will likely be dispersed over the near term, lessening the impact on supply.

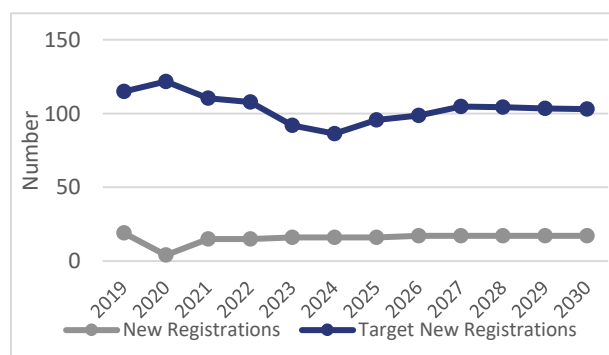
The trade saw continued growth in 2020, despite the decline in overall economic activity. Employment growth will likely slow in 2021, consistent with the anticipated decline in industry activity, before rising again in 2022 and moderating over the remainder of the forecast period. Replacement of retiring workers will continue to be the driving force for recruitment, requiring 340 certified journeypersons over the forecast period. More than 1,000 new registrants are likely required to keep pace with certification requirements over the long-term, significantly above current levels of 17 per year. An increase in the rate of completion could drastically reduce the recruitment requirement over the next decade. Alternatively, workers who have partially completed training may be currently meeting these requirements.

Machinist Certification Requirements & Anticipated Completions, 2019 to 2030

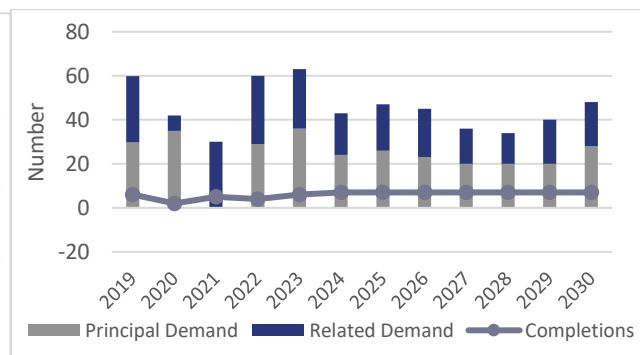
Machinist	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	19	4	15	15	16	16	16	17	163
Target New Registrations	115	122	110	108	92	86	96	103	1,006
Completions*	6	2	5	4	6	7	7	7	64
Employment									
Certified Workforce	433	450	434	446	465	472	480	494	
Principal Trade Demand									
Replacement Demand	13	18	16	17	17	17	17	16	166
Expansion Demand	17	17	-16	12	19	7	8	6	58
Total Principal Demand	30	35	0	29	36	24	26	22	226
Related Trade Demand									
Replacement Demand	18	17	18	18	18	18	17	17	174
Expansion Demand	12	-10	12	13	9	1	3	1	45
Total Related Demand	30	7	30	31	27	19	21	18	220
Total Demand for Certificate	60	42	30	60	63	43	47	41	446

* Average Completion Rate 40%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Metal Fabricator

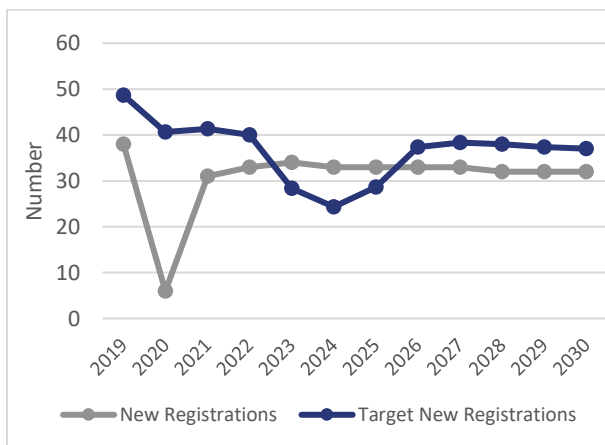
The program saw significant fluctuations in new apprenticeship registrations between 2007 and 2016. Apart from 2020, there has been minimal fluctuation over the past few years, a trend projected to continue over the coming decade. The projected trend in new registrations will likely be sufficient to meet certification requirements but maintaining these levels of registrations, even during periods of slower growth, will be crucial to sustaining current levels of the workforce.

Metal Fabricator Certification Requirements & Anticipated Completions, 2019 to 2030

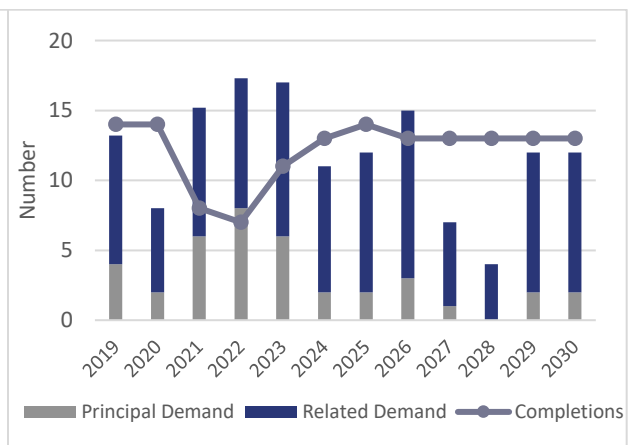
Metal Fabricator	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	38	6	31	33	34	33	33	32	326
Target New Registrations	49	41	41	40	28	24	29	38	351
Completions*	14	14	8	7	11	13	14	13	118
Employment									
Certified Workforce	98	98	102	107	111	110	110	107	
Principal Trade Demand									
Replacement Demand	2	2	2	3	3	3	3	3	27
Expansion Demand	1	0	4	5	4	-1	0	-1	7
Total Principal Demand	4	2	6	8	6	2	2	2	32
Related Trade Demand									
Replacement Demand	8	7	8	8	8	8	7	7	74
Expansion Demand	1	-1	1	1	3	1	3	1	17
Total Related Demand	9	6	9	9	11	9	10	8	91
Total Demand for Certificate	13	8	15	17	17	11	12	10	123

* Average Completion Rate 36%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Power Engineer

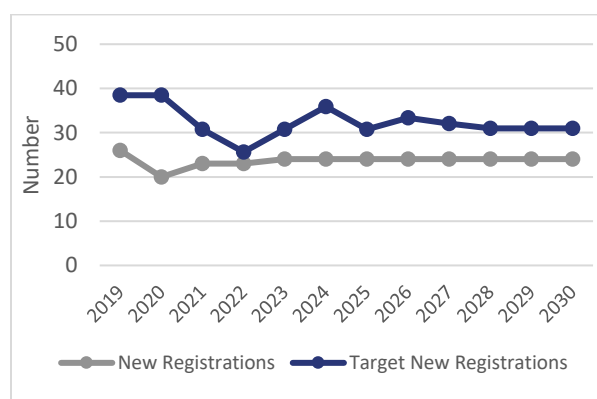
Power engineer is separated into several levels, of which the number of new registrations and completions vary. New registrations have been on the decline over the past few years, particularly for 2nd class registrants. Despite this decline, new registrations are anticipated to remain just under 25 registrants per year for all classes across the majority of the forecast period. The number of completions coming out of the program are extremely low, indicating these apprentices are likely meeting demand requirements without ‘completing’ the trade program.

Power Engineer Certification Requirements & Anticipated Completions, 2019 to 2030

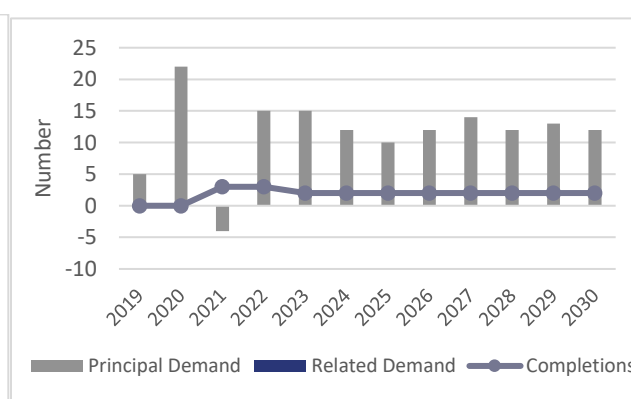
Power Engineer	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	26	20	23	23	24	24	24	24	238
Target New Registrations	38	38	31	26	31	36	31	32	312
Completions*	27	0	3	3	2	2	2	2	22
Employment									
Certified Workforce	343	354	342	348	353	356	356	361	
Principal Trade Demand									
Replacement Demand	8	11	8	9	9	9	10	11	100
Expansion Demand	-3	11	-12	6	5	3	0	2	10
Total Principal Demand	5	22	-4	15	15	12	10	13	111
Related Trade Demand									
Replacement Demand									
Expansion Demand									
Total Related Demand									
Total Demand for Certificate	5	22	-4	15	15	12	10	13	111

* Average Completion Rate 32%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Note: Power engineer includes all three classes

Welder

Welder is a voluntary trade in Nova Scotia with a relatively high program completion rate of just under 70%. Following a significant decline in 2020, new registrations are anticipated to return to historic levels and be sustained at these levels over the coming decade.

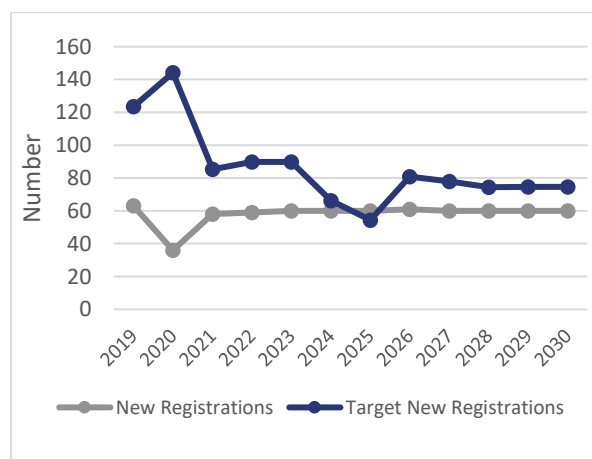
Replacement demand will be the driving force for recruitment over the forecast period, requiring more than 360 new journeypersons to meet certification requirements in principal occupations, and an additional 174 certified journeypersons to replace retiring workers within related welder occupations. In addition to rising rates of retirement, strong employment growth is projected through until 2023, before slowing in the latter part of the decade. Increasing demands for specialized welders to meet shipbuilding demands and in other sectors may continue to challenge employers and will require increased recruitment over the forecast period to keep pace with demand.

Welder Certification Requirements & Anticipated Completions, 2019 to 2030

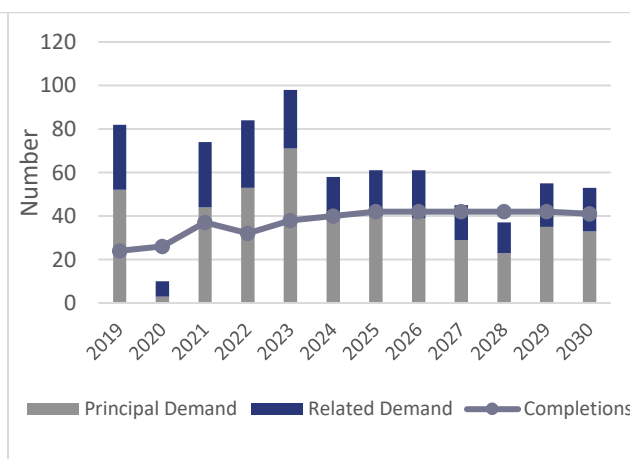
Welder	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	63	36	58	59	60	60	60	60	598
Target New Registrations	124	144	85	90	66	54	81	76	768
Completions*	24	26	37	32	38	40	42	42	398
Employment									
Certified Workforce	1,339	1,305	1,312	1,327	1,362	1,364	1,368	1,357	
Principal Trade Demand									
Replacement Demand	37	37	37	37	37	37	37	35	362
Expansion Demand	15	-34	7	15	35	2	4	-4	44
Total Principal Demand	52	3	44	53	71	39	40	32	406
Related Trade Demand									
Replacement Demand	18	17	18	18	18	18	17	17	174
Expansion Demand	12	-10	12	13	9	1	3	1	45
Total Related Demand	30	7	30	31	27	19	21	18	220
Total Demand for Certificate	82	10	74	84	98	58	61	50	626

* Average Completion Rate 68%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030





Motive Power Sector

New registrations in the motive power sector are anticipated to have experienced a significant decline of -64% (250 fewer new registrations) in 2020. Registrations are anticipated to see a recovery in 2021 and continue to rise over the outlook period. The overall decline in employment in 2020 was partially offset by employment gains for automotive service technicians and truck and transport mechanics. Similarly, the anticipated recovery in 2021 is also subdued as these trades are forecast to experience a decline in employment demand.

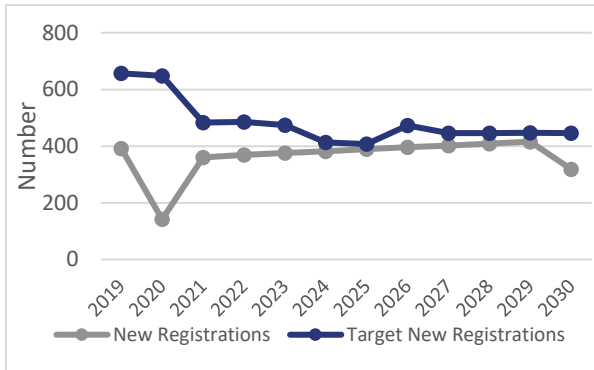
Assuming completion rates remain at historic levels, the motive power sector is projected to require approximately 4,520 new registrants to keep pace with demand requirements over the long-term. Recruitment and training will be particularly important in the near-term, as demand is projected to slow in the latter part of the forecast period due to slower employment growth. Retirements and general workforce attrition will be the driving force behind the need for recruitment over the outlook period, accounting for 1,227 (53%) potential job openings, while 1,107 (47%) potential openings can be attributed to employment growth over the same period. Training and retention of new apprentices will be particularly important for heavy duty equipment technician and motor body repairer programs. The table below provides a summary of projected yearly new registrations, program completions, and certification requirements.

Motive Power Sector Certification Requirements & Anticipated Completions, 2019 to 2030

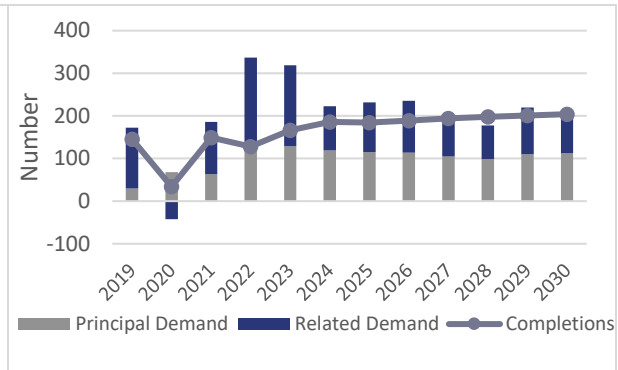
Motive Power Sector	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	392	142	360	369	376	382	390	388	3,818
Target New Registrations	657	648	484	485	474	413	407	452	4,522
Completions*	145	34	149	128	166	186	184	197	1,799
Employment									
Certified Workforce	2,522	2,529	2,531	2,598	2,662	2,716	2,766	2,893	
Principal Trade Demand									
Replacement Demand	61	61	62	64	65	66	66	65	648
Expansion Demand	-31	7	2	67	64	54	50	43	453
Total Principal Demand	30	68	64	130	129	119	115	108	1,097
Related Trade Demand									
Replacement Demand	57	40	57	58	59	59	54	59	579
Expansion Demand	86	-83	65	149	131	45	62	40	654
Total Related Demand	142	-43	122	207	190	104	116	99	1,232
Total Demand for Certificate	172	25	186	337	319	223	231	207	2,328

* Average Completion Rate 48%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Automotive Service Technician

Automotive Service Technician is a compulsory trade in Nova Scotia. Registrations in the program have risen steadily from just over 100 in 2010 to nearly 230 in 2019. Annual program completions have also increased, surpassing 100 in 2017, and have since hovered in the mid to high 70s per year. The pace of employment growth for certified Automotive Service Technicians declined in 2019 and 2020 but is expected to recover by 2022. Taking retirements into account, total certification requirements of nearly 1,300 new journeypersons are projected between 2021 and 2030.

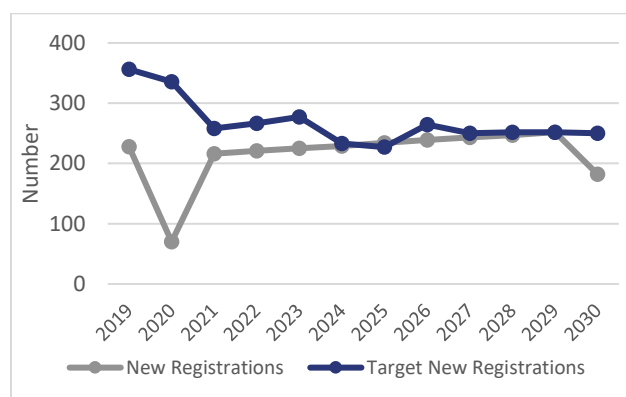
New registrations are estimated to have declined to under 100 in 2020 but are expected to recover in 2021. At projected levels of new registration and assuming recent trends in rates of completion, demand is expected to be mostly met by an estimated 1,040 new journeypersons over the same period – suggesting a balanced skill labour market.

Automotive Service Tech Certification Requirements & Anticipated Completions, 2019 to 2030

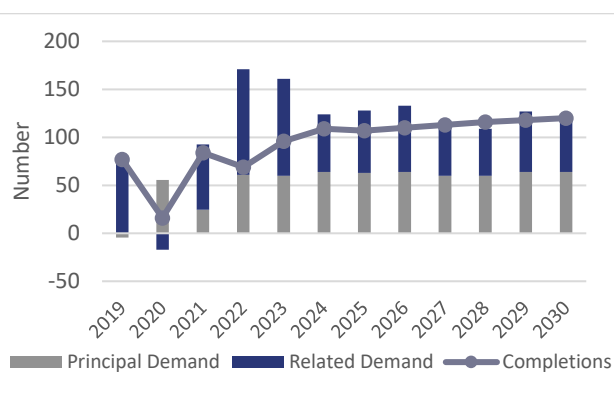
Automotive Service Tech	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	228	70	216	221	225	229	234	233	2,288
Target New Registrations	356	335	258	267	277	233	227	254	2,531
Completions*	77	16	84	69	96	109	107	115	1,042
Employment									
Certified Workforce	1,236	1,264	1,261	1,294	1,325	1,358	1,392	1,488	
Principal Trade Demand									
Replacement Demand	27	28	27	29	29	30	30	30	297
Expansion Demand	-32	28	-3	33	31	33	34	32	290
Total Principal Demand	-5	56	25	61	60	64	63	62	585
Related Trade Demand									
Replacement Demand	36	23	36	37	38	38	34	38	372
Expansion Demand	44	-40	32	73	63	22	31	20	321
Total Related Demand	80	-17	68	110	101	60	65	58	693
Total Demand for Certificate	75	39	93	171	161	124	128	120	1,278

* Average Completion Rate 48%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Note: Includes both automotive service technician and automotive service technician (service centre technician)

Motor Body Vehicle Repair

Motor Vehicle Body Repairer is a compulsory trade in Nova Scotia. New registrations in this program have been relatively stable over the past decade, while demand has been rising. New registrations totalled almost 40 in 2019 and fell to an estimated 14 in 2020. Hiring requirements for the trade, driven by retirements and expansion demands in related trades, are rising in Nova Scotia and this trend is expected to continue over the coming decade. It is estimated that the demand for newly certified journeypersons will total 350 over the 10-year period between 2021 and 2030. A significant portion of this demand is driven by retirement of older managers and supervisors and other related trades.

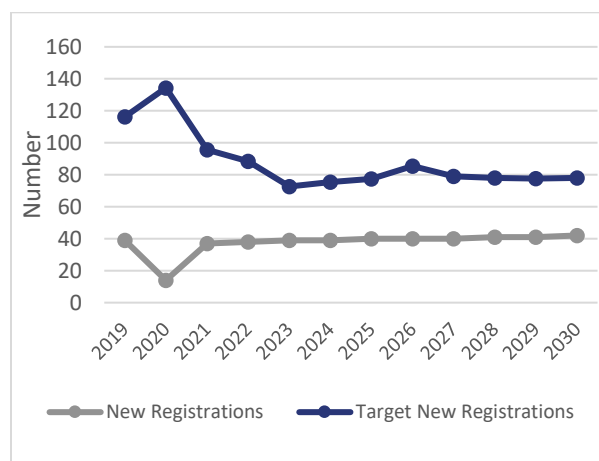
Over the same period, just over 150 newly certified journeypersons are expected given current rates of registration and completion. This suggests the potential for falling rates of certification and increased skills shortages unless new registrations or rates of completion rise.

Motor Body Vehicle Repair Certification Requirements & Anticipated Completions, 2019 to 2030

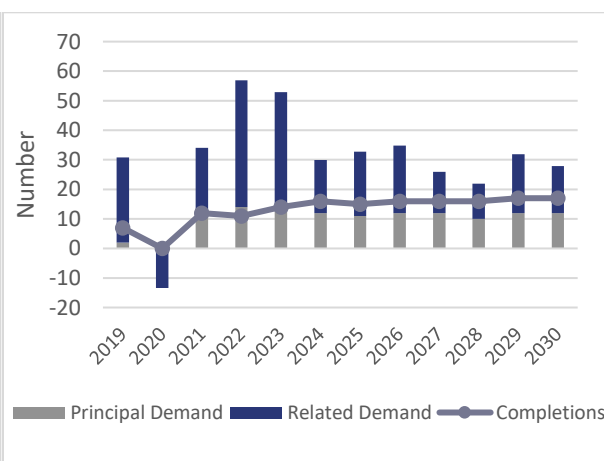
Motor Body Vehicle Repair	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	39	14	37	38	39	39	40	41	397
Target New Registrations	116	134	96	88	75	77	85	80	807
Completions*	7	0	12	11	14	16	15	16	150
Employment									
Certified Workforce	309	303	307	314	320	325	328	339	
Principal Trade Demand									
Replacement Demand	7	6	8	7	8	8	8	8	80
Expansion Demand	-5	-6	4	7	6	5	3	3	42
Total Principal Demand	2	0	12	14	14	12	11	12	121
Related Trade Demand									
Replacement Demand	7	6	7	7	7	7	7	7	69
Expansion Demand	22	-20	15	36	32	11	15	10	159
Total Related Demand	29	-13	22	43	39	18	22	17	228
Total Demand for Certificate	31	-13	34	57	53	30	33	28	349

* Average Completion Rate 42%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Heavy Duty Equipment Technician

New registrations in this program reached 30 in 2019 though averaged less than 20 per year over the past decade. New registrations are expected to average 18 per year after falling to an estimated 12 in 2020. Hiring requirements for Heavy Duty Equipment Technicians have risen since 2016 and the pace of growth is expected to accelerate over the next five years driven by steady retirements and a rise in expansion requirements. Demand requirements for newly certified journeypersons is expected to total 271 between 2021 and 2030. This compares to just 86 anticipated completions over the same period.

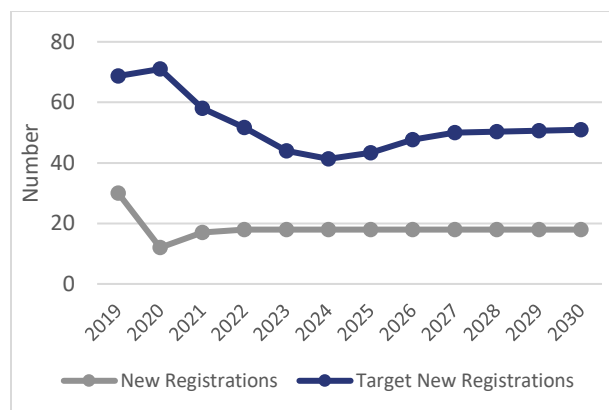
The analysis suggests the trade's certified workforce share has been declining and is likely to continue along this trend over the coming decade.

Heavy Duty Equip Tech Certification Requirements & Anticipated Completions, 2019 to 2030

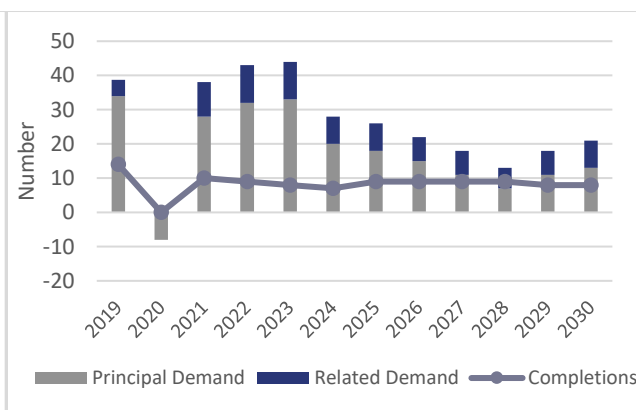
Heavy Duty Equipment Tech	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	30	12	17	18	18	18	18	18	179
Target New Registrations	69	71	58	52	44	41	43	50	488
Completions*	14	0	10	9	8	7	9	9	86
Employment									
Certified Workforce	523	498	509	524	540	544	545	533	
Principal Trade Demand									
Replacement Demand	17	17	17	17	17	17	17	15	162
Expansion Demand	17	-25	11	15	16	4	1	-4	27
Total Principal Demand	34	-8	28	32	33	20	18	11	188
Related Trade Demand									
Replacement Demand	7	5	7	7	7	7	7	7	70
Expansion Demand	-2	-4	3	4	4	1	1	0	15
Total Related Demand	5	1	10	11	11	8	8	7	83
Total Demand for Certificate	39	-7	38	43	44	28	26	18	271

* Average Completion Rate 51%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030



Truck and Transport Mechanic

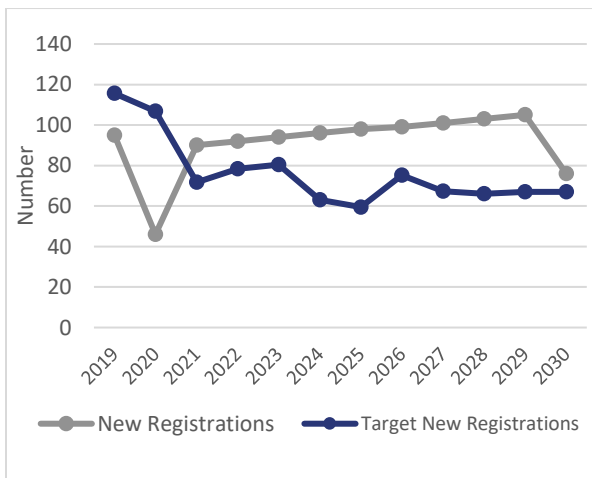
Truck and Transport Mechanic is a compulsory trade in Nova Scotia. New registrations in the program have risen steadily over the past decade reaching 95 in 2019. Annual program completions have increased from the high 30s to nearly 50 in 2019. Hiring requirements, which slowed in 2019 and 2020, are expected to rise to over 60 per year in 2022 and 2023, before returning to around 40 per year for the latter half of the coming decade. Given these trends, supply and demand for certification is generally balanced for this trade. Estimated requirements of 430 new journeypersons are expected to be met by approximately 520 apprenticeship completions over the 2021 – 2030 period.

Truck & Transport Mechanic Certification Requirements & Anticipated Completions, 2019 to 2030

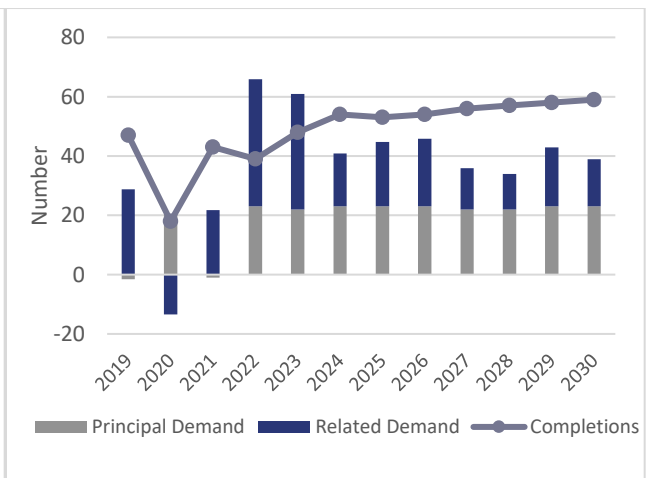
Truck & Transport Mechanic	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	95	46	90	92	94	96	98	97	954
Target New Registrations	116	107	72	78	80	63	59	69	696
Completions*	47	18	43	39	48	54	53	57	521
Employment									
Certified Workforce	454	464	453	465	476	488	500	535	
Principal Trade Demand									
Replacement Demand	10	10	10	11	11	11	11	11	109
Expansion Demand	-12	10	-11	12	11	12	12	12	94
Total Principal Demand	-2	20	-1	23	22	23	23	23	203
Related Trade Demand									
Replacement Demand	7	6	7	7	7	7	7	7	69
Expansion Demand	22	-20	15	36	32	11	15	10	159
Total Related Demand	29	-13	22	43	39	18	22	17	228
Total Demand for Certificate	27	7	21	66	61	41	45	39	430

* Average Completion Rate 57%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030





Service Sector (Cook)

The service sector was the most impacted by the restrictions imposed by COVID-19. Significant declines in employment demand were evident for front-line cooks as well as related occupations including chefs, restaurant and food service managers and food service supervisors. New registrations are anticipated to fall approximately - 75% in 2020, followed by a strong recovery in 2021 as restrictions are lifted.

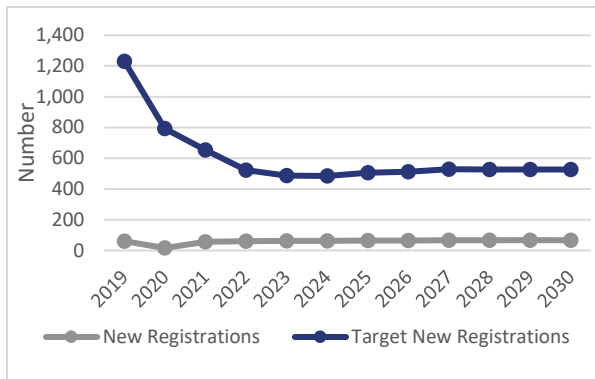
Over the coming decade, demand for certified cooks is projected to be driven by both a strong recovery in employment requirements and rising rates of retirement. Based on the low registration levels and completion rate, the province would need to recruit nearly 6,200 apprentices over the coming decade to keep pace with certification requirements over the long-term. Employers have experienced shortages of certified cooks over the last few years and the gap is expected to become wider over the coming decade unless registrations or completion rates rise. There is an alternative argument that cook apprentices who partially complete are meeting industry demand. The table below provides a summary of projected yearly new registrations, program completions, and certification requirements.

Cook Certification Requirements & Anticipated Completions, 2019 to 2030

Cook	2019	2020	2021	2022	2023	2024	2025	Annual Average 2026-2030	Total 2021-2030
Supply of Journeypersons									
New Registrations - Actual/Predicted	61	16	57	60	62	63	64	67	640
Target New Registrations	1,234	818	679	546	499	480	492	700	6,196
Completions*	10	12	9	7	10	12	12	13	115
Employment									
Certified Workforce	2,010	1,685	1,864	1,948	2,024	2,068	2,097	2,173	
Principal Trade Demand									
Replacement Demand	30	24	29	30	31	32	32	38	345
Expansion Demand	8	-325	179	84	76	44	29	29	557
Total Principal Demand	37	-301	208	114	107	76	61	68	905
Related Trade Demand									
Replacement Demand	21	17	21	22	23	23	24	25	240
Expansion Demand	46	-307	207	52	47	27	18	18	441
Total Related Demand	68	-290	228	75	70	50	42	43	681
Total Demand for Certificate	105	-591	436	189	177	126	103	111	1,586

* Average Completion Rate 20%

New Registrations & Target New Registrations, 2019-2030



Completions & Total Demand for Certification, 2019-2030

