

Canada's upstream oil and gas industry is estimated to employ more than 45,000 skilled tradespeople, and industry demand for these workers is projected to grow by another 7,100 jobs by 2022. The need for tradespeople is expected to grow in all skilled trades occupations, with particularly strong demand for power engineers, heavy equipment operators, oil and gas well drillers, servicers, testers and related workers.

Low apprenticeship retention and completion rates are barriers to meeting the demand for skilled workers. If oil and gas companies take specific steps to support apprentices in their programs, they can help increase retention and completion.

### GROWTH IN APPRENTICE REGISTRATIONS

The number of new apprenticeship registrations is growing. The increase is attributed to positive economic conditions and the coordinated efforts of stakeholders to attract workers to careers in trades, provide high-quality technical education and offer incentives to companies to hire apprentices (through tax credits). Growth in apprentice registrations is especially strong in Canada's largest oil-producing province, Alberta, where the total number of new apprentices registered in 2013 grew by almost 50 per cent since 2010.

### APPRENTICE COMPLETIONS

Although registrations are on the rise, completions and certifications have not grown proportionally.\* Figure 1 illustrates how large increases in registered apprentices may result in only moderate increases in apprenticeship completions, which begin to have an effect several years after new registrations occur.

Additionally, in 2013, Alberta's implied on-time completion rates for four-year apprentice programs for selected core occupations (see table below) ranged from a high of 59 per cent for electricians to a low of 42 per cent for machinists. (This method uses data from the Registered Apprenticeship Information System [RAIS] and is the number of apprenticeship completions in a given year divided by the number of new apprenticeship registrations in an earlier year.)

Registered Apprentices, New Registrations and  
Apprentice Completions 1991–2011, Major Oil  
Producing Provinces

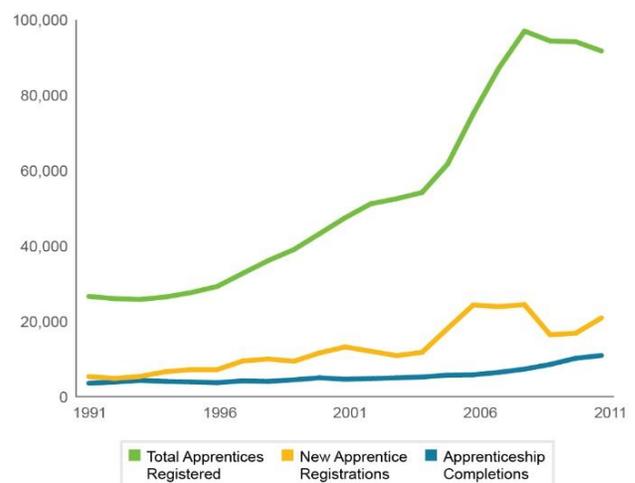


FIGURE 1 Source: Cansim Table 477-0053, 477-0054, 477-0055, Statistics Canada

### IMPLIED ON-TIME COMPLETION RATES FOR CORE OIL AND GAS TRADES PROGRAMS, ALBERTA, 2013

Four-Year Programs	New Apprentices Registering in 2009 (A)	Apprentices Completing Programs in 2013 (B)	Implied Completion Rate in Four Years (B/A)
Electricians	2,210	1,302	59%
Heavy equipment technicians	1,214	684	56%
Millwrights	443	234	53%
Machinists	179	75	42%

TABLE 1 Source: Alberta Apprenticeship and Industry Training Board, Statistical Profiles 2013. Implied on-time completion rates calculated by PHRC.

\*No consensus has been reached regarding the best measure for apprenticeship completion rates, and estimates differ significantly based on the calculation method used.

### FACTORS IMPACTING APPRENTICESHIP COMPLETIONS

A complex set of factors affects whether workers complete an apprenticeship program. The 2007 National Apprenticeship Survey asked more than 17,500 apprentices who withdrew from their program about the reasons for their apprenticeship non-completion. Of those who responded, 30 per cent checked the “other” category as the top reason for discontinuing their apprenticeship.

Labour Market Factors	Employer Challenges	Apprentice Concerns
Economic downturns, subsequent lay-offs and workers transition to more stable occupations	Unable to provide apprentices with the variety of experience required across the scope of practice for the trade, preventing the apprentice from progressing	Remote worksites and challenging working conditions
High tuition and training costs	Poor communication between mentors and apprentices	Inadequate employer onboarding due to rapid hiring requirements
Lost wages during training programs	Limited ability to provide time off to attend training programs	Added level of responsibility on becoming a journeyman

### EFFECTIVE STRATEGIES TO INCREASE COMPLETION RATES

The first step is to invest in an apprenticeship training program. For employers new to hiring apprentices, the provincial apprenticeship training organizations and the Canadian Apprenticeship Forum (CAF) provide materials to streamline and simplify the process. A review of data, literature and interviews with apprenticeship stakeholders identified several effective strategies that employers can implement to increase apprenticeship completion rates.

- Clearly communicate the job duties, working conditions, employer expectations and requirements for apprenticeship success to candidates before they begin their program.
- Foster a strong mentoring relationship between journeymen and apprentices.
- Develop a company culture that encourages apprentices to continue technical training.
- Provide apprentices the support needed to successfully complete their apprenticeship program.
- Establish transition plans for apprentices to help them complete training and certification after lay-offs or during economic downturns.

By using these strategies to implement apprenticeship programs, oil and gas employers can increase apprenticeship completions and expand the labour supply of qualified tradespeople available to the oil and gas industry for future years.

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