

Mining Skills Innovation Research Project

Background

The Mining Association of BC (MABC), in partnership with the Centre for Training Excellence in Mining (CTEM), has developed the *Mining Skills Innovation Research Project*. Funded through the federal Future Skills Program, this Project brought together industry, training organizations and community representatives to better understand labour market demand and supply, identify barriers to training delivery and explore practical solutions to strengthen the mining workforce pipeline.

Job Opportunities in British Columbia Mining

BC's mining industry is poised for transformative growth. With our vast mineral reserves, we have the potential to unlock billions in near-term economic activity — and with that, jobs for workers, stability for communities, and economic security and resilience for all British Columbians.

BC has 18 mines and two smelters operating that generate \$18 billion in annual economic activity, over \$3 billion in annual revenue for the government, and directly and indirectly employ nearly 40,000 workers in high-paying jobs in every region of the province.

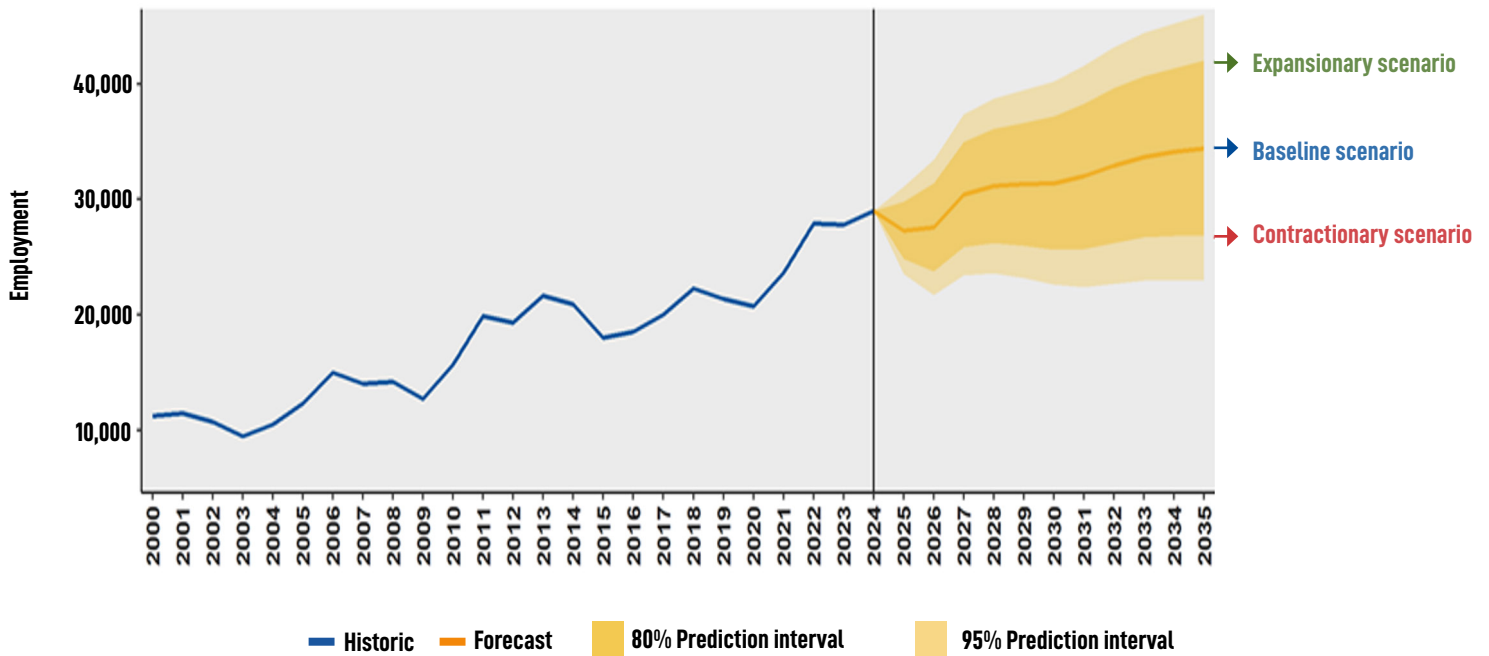
With an additional 31 new or expanded projects now being pursued across the Province, achieving this nation-building opportunity requires a strong, skilled workforce that can respond to the dynamic needs of the mining industry. The *Mining Skills Innovation Research Project* examines the magnitude of this opportunity.

The Demand for Workers is Growing and Supply is Limited

The Mining Skills Innovation Research Project undertook an extensive labour market demand and supply analysis examining BC's current and future workforce needs. The results clearly show that BC's mining workforce will face significant hiring pressure over the next decade.

In 2024, approximately 29,000 people were directly employed in mining. Under baseline growth assumptions (a scenario where current trends continue) employment is projected to reach 34,400 workers by 2035, requiring a net increase of more than 5,000 workers. Under a more expansionary scenario, this need could grow to 42,000 net works, which could require more than 12,000 net new workers to meet the sector's workforce needs.

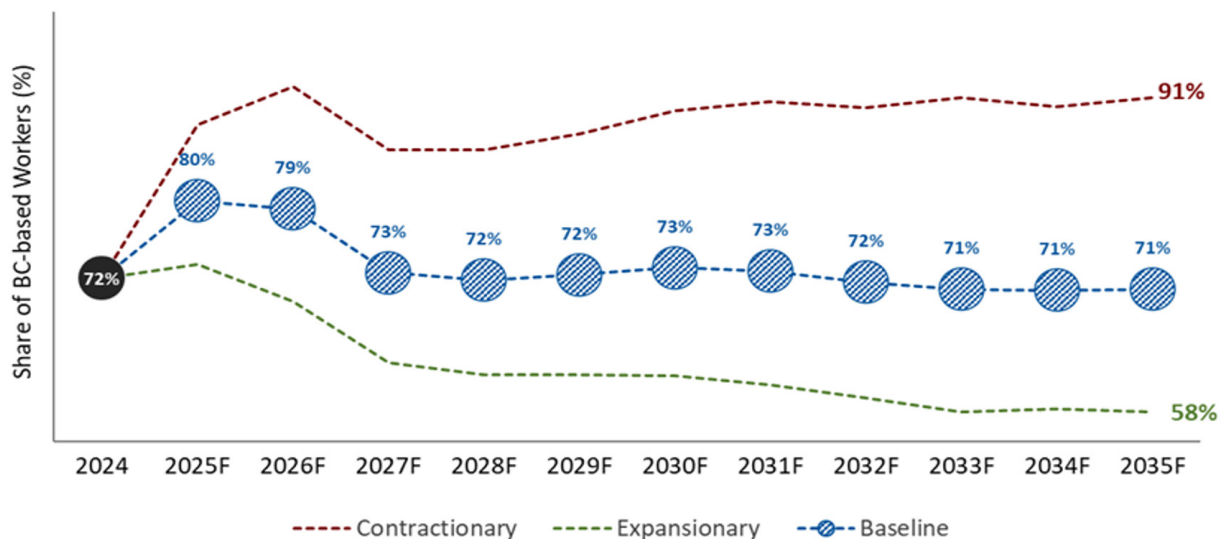
Historic (2000 – 2024) and forecasted (2025 – 2035) employment for B.C.'s mining sector, demand scenarios



Accounting for predicted retirements and turnover within the existing workforce, this baseline assumption alone equates to a cumulative hiring need of up to 35,000 new workers over the next ten years.

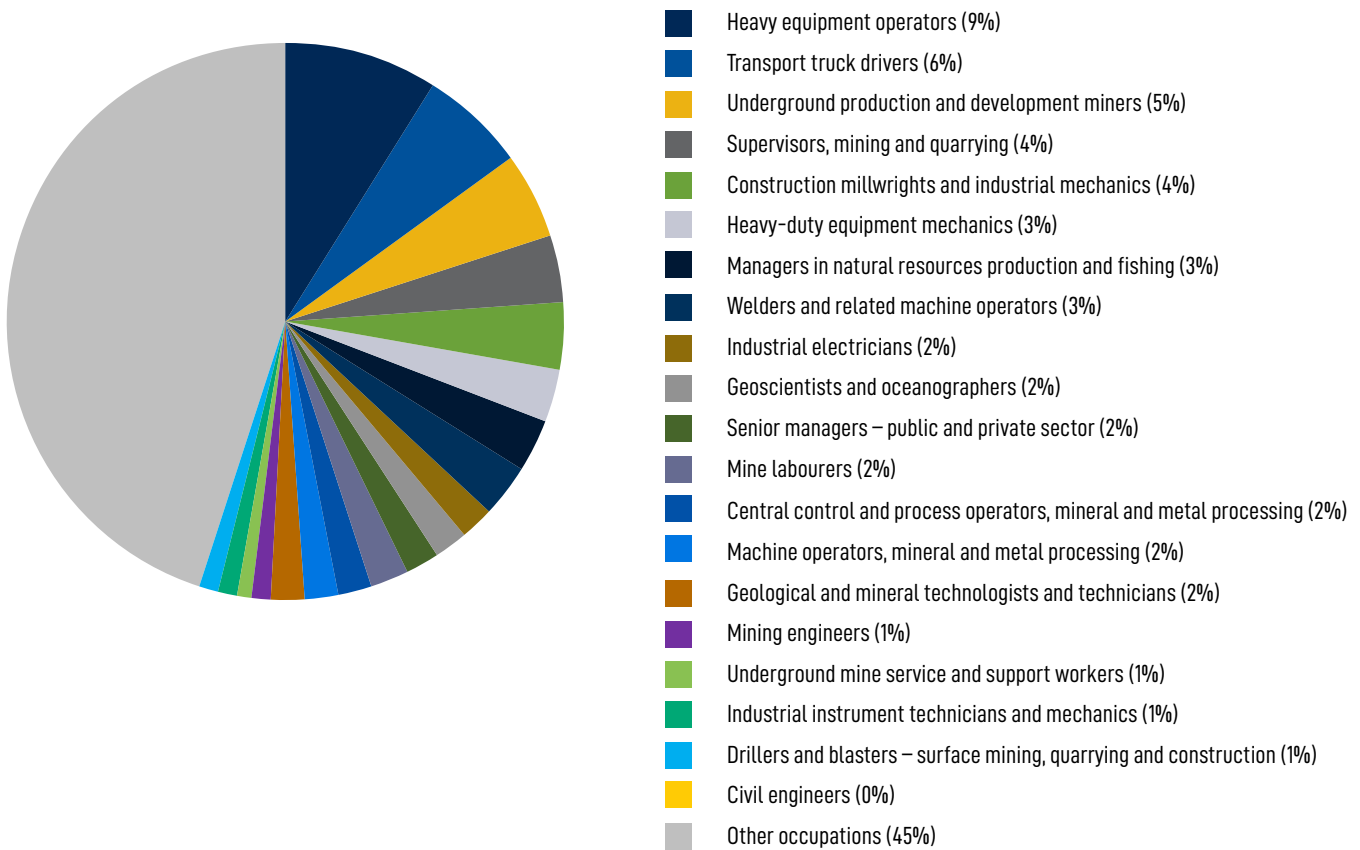
Currently, the industry currently depends on out-of-province workers for 28 per cent of its workforce. Based on above estimates, this proportion is likely to increase without targeted intervention.

Current (2024) and forecasted (2025 – 2035) share of B.C.-based workers in B.C.'s mining sector, demand scenarios



The mining workforce is comprised of 120 occupations. Twenty of these “critical” occupations — including heavy equipment operators, truck drivers, underground miners, millwrights, electricians, geoscientists and mining engineers — represent more than half of the total mining workforce.

Occupational Composition in British Columbia’s Mining Sector (2024)



These 20 critical occupations are already challenging to fill. Labour supply projections indicate that B.C.’s overall workforce will expand, but mining’s share of it will remain at roughly one per cent of the provincial labour pool. At the same time, only five per cent of B.C.’s total labour supply can fulfill the 20 critical occupations that mining relies on. This means that recruitment efforts alone will not be enough to close the gap.

Pursuing Innovation in the Mining Training Ecosystem

Addressing this gap in BC-based mining workers for the future will require a dual-track approach. In occupations with deeper labour pools, the sector must continue to drive competition strategies to attract skilled workers from other provincial sectors. In occupations with shallow labour pools, the mining industry must focus on long-term collaboration strategies including expanding awareness, strengthening training pathways and developing new entrants to grow the workforce over time.

Skills analysis highlights mining's reliance on technical competencies such as equipment operation, quality control and process monitoring, as well as physical and cognitive abilities like depth perception and spatial visualization. There is a clear overlap in mining skills and abilities with other sectors, demonstrating both competitive pressure as well as the opportunity for transferability between industries as well as enhanced focus on training for skills moving forward.

Central to the *Mining Skills Innovation Research Project* is an understanding of the mining training ecosystem that can meet these skills needs — the interconnected network of employers, training providers, communities, government agencies, policies, funding models and infrastructure that together shape how skills are developed and accessed. While B.C.'s training ecosystem is structured to meet the needs of a workforce where large quantities of workers are regularly and consistently needed (i.e. trades, nurses, accountants, engineers), it has yet to fully address the unique complexities of B.C.'s mining industry.

Understanding the training ecosystem is vital to a coordinated response. A survey and key informant interviews allowed for a B.C. specific understanding of the gaps, along with opportunities and priorities identified by individuals working in and connected to B.C.'s mining training ecosystem.

To be adaptable to the real needs of the local mining workplace, the prioritization of accessible, flexible and locally delivered training will be essential. The importance of removing and mitigating less visible training barriers (e.g. financial and housing insecurity, transportation and childcare supports), expanding and modernizing how training is delivered, responding to the needs of learners, and creating clear, accessible pathways into mining careers were suggested as ways to expand the pool of potential workers.

Accelerating Mining Workforce Development

The *Mining Skills Innovation Research Project* concludes that B.C.'s opportunity lies in learning from and applying global best practices while adapting to local strengths. The province already has significant advantages: an established industry presence, strong presence of training providers and growing government commitment to skills development. A well-designed mining specific workforce development accelerator could transform these assets into a sustainable competitive advantage.

To help mitigate the challenges in growing the B.C. mining workforce, the B.C. Mining Training Accelerator is proposed. Based on global best-practices, an accelerator would align industry, post-secondary training providers, communities and workforce agencies; provide modular and community-based training; integrate simulation and digital learning technologies; support entry into the workforce; enable skills development for career growth and leadership development; and use labour market intelligence to anticipate future skills needs.

These long-term approaches must be matched by near-term focus on flexible, adaptable and scalable training opportunities that target the sector's most critical occupations and skills needs through collaboration between training organizations and industry.

The B.C. mining sector is at a pivotal moment. Without coordinated action, labour and skills shortages will constrain the province's ability to respond to global demand for critical minerals. The B.C. Mining Training Accelerator offers a practical model to strengthen workforce development, support inclusive participation and ensure the sector can meet both current and future labour needs.

