



The \$280bn dilemma

There's no doubt that Australia is mineral-rich, but digging up talent is a bigger challenge, writes **ORYANA ANGEL**

THE success of \$280.9 billion worth of resource projects underway in Australia hinges on finding skilled people to fill critical roles.

"Right now, we're facing pretty difficult circumstances – we don't have the arms and legs that we need to be able to complete many of these projects on time and on budget," says Australian Mines and Metals Association (AMMA) executive director of industry services, Minna Knight.

With most of the investment occurring in significant LNG projects in Queensland, the Northern Territory and northern-Western Australia, the issue is compounded by the difficulty in getting people living in the east to move west for work.

The mining construction workforce is set to peak at 83,000 workers with an additional 15,000 engineering staff by mid-next year, according to recent AMMA figures. Once completed, it is expected that 85,000 people will be needed to run the projects.

If we think we have a problem now, at this current rate of growth, we're in for a crippling shortage of skilled labour as construction peaks, says Minerals Council of Australia (MCA) director of education and training, Chris Fraser.

"Skills shortages are going to intensify as the amount of construction activity escalates," he says. "Over the rest of this decade we're going to have critical skills shortages."

Experts predict the resource industry workforce will grow by around 100,000 people within the next five years, a number which will be a struggle to attain. Already it has exceeded all expectations.

"In 2010, we were projecting the workforce would have grown by 70,000 to about 220,000 by 2015," Fraser says. "We are already at 260,000 people. In just two years we surpassed the predictions for five."

Currently, around 250 mining engineers graduate each year in Australia. "We need double that," he says.

Skills advisor to the resources sector, Kinetic Group's CEO, Derek Hunter, identifies scarcity in three major skills areas.

"Statutory positions required within a mine site, like open cut examiners,

occupational health and safety supervisors and mine deputies positions are in extreme short supply and require significant mine experience and have major legal accountability," he says.

"These roles are beyond critical and without them you close a mine site."

The trades, including, electrical roles, diesel fitter roles, mechanics and technicians, are another area in critical short supply.

"They are in fundamental short supply and the challenge is in sheer numbers," says Hunter. "There is a lack of people in

training." Growth figures suggest a major crisis in this field. Even if large numbers of people wanted to take on the roles, current training takes four years to complete.

"The industry in the past has always expected it could pull in experienced people, but that isn't possible anymore," says Hunter. "For the first time, we have to start providing structured pathway programs for operator roles."

Introducing a para-professional base with two-year associate degrees in mining engineering and geoscience is one initiative to address the graduate skills dearth, says executive director of the MCA's Minerals Tertiary Education Council, Dr Gavin Lind.

"Holders of these can perform functions in the disciplines of mining engineering," says Dr Lind. "Jobs that are routine in nature and currently performed by a mining engineer who completed a four-year degree, could be done in part by someone who is upskilled enough to tackle those roles."

"We think it will take the pressure off the need for four-year trained mining engineers and geoscientists and the industry's overreliance on those skills."

Enrolments in the two-year associate degree programs are slated to be open by the middle of next year.

While associate degrees are a promising initiative to combat the current skills crisis, Central Queensland University (CQU) has been offering such degrees in geo-science, mine operations management and mine technology for seven years.

"Most of the students are already in the workforce," says CQU Engineering and Physics head of program, Dr Fae Martin. "Some of them might be in management

roles or already working in quasi-geotechnical roles. They were generally up-skilling."

Most of the students work out in the mines and study by distance and part-time.

"We don't want to take them out of employment when training. These programs meet that," Dr Martin adds.

In a bid to encourage more mature-age apprentices and increase people enrolling into apprenticeships relevant to the sector, there has been a shift in VET, too.

"The industry is accelerating the process in circumstances where people already have certain types of skills that are transferable into the resource industry," says Knight.

Increasing the participation of women in the resource industry, through AMMA's Australian Women in Resource Alliance (AWRA), is another initiative to boost the workforce. "Women are an untapped highly skilled source of human capital," she says. "It's proven that if you bring more females into a particular environment the diversity can increase productivity," she says.