Work for Queensland
Resources Skills and Employment Plan
# Table of contents

- Introduction ........................................ 2
- Executive summary ................................. 3
- **PART 1: Resources sector labour demand** ... 4
  - Major projects .................................. 5
  - Anticipated workforce ......................... 6
  - Replacement demand ........................... 7
  - Impact on regional communities .......... 8
- **PART 2: Responses** ............................. 9
  - A better understanding of industry need .. 10
  - Build the workforce in targeted communities 11
  - Increase workforce participation .......... 12
    - Women ...................................... 12
    - Indigenous .................................. 12
    - Skilled migration ........................... 12
    - Strengthened EIS requirements ............ 13
  - Maximise skills development in mining and gas operations and construction 14
    - Professions and para-professions ........ 14
    - Trades and semi-skilled occupations ...... 15
- References .......................................... 17
- Attachment 1: Actions table ..................... 18
- Attachment 2: Priority occupations and responses 20
  - Mining operations ............................ 20
  - Construction .................................. 22
- Attachment 3: Projected employment by occupations 23
Introduction

Over the next ten years, Queensland will experience unprecedented resources sector growth. From major expansion of the local coal industry in the Galilee and Northern Bowen Basins to the emerging coal seam gas-liquefied natural gas (CSG-LNG) export industry centred around the Surat Basin and Gladstone, this growth presents major opportunities for business, industry and communities across the state.

The Queensland Government is committed to working with industry to ensure all Queenslanders share the benefits of the resources boom. One of those opportunities is to engage the state’s workforce and jobseekers to meet the labour demands of the industry. This is why the Government has initiated the *Work for Queensland* initiative in partnership with the resources industry.

As part of this initiative, five Mining and Gas Jobs Expos were held across Queensland in October and November 2011. More than 24,000 Queenslanders attended the expos. This highlights the public interest in finding out about the future opportunities available in the resources sector.

This *Resources Skills and Employment Plan* is another key element of the *Work for Queensland* initiative. Building on a broad range of workforce development activities across industry and government, the Plan identifies additional measures to be considered. In particular, it identifies opportunities for jobseekers in areas of the state experiencing higher levels of unemployment to ‘link’ with the jobs being provided by the industry.

The Plan has been developed by a joint industry and government taskforce. The taskforce’s role is to identify priority occupations in demand for the resources sector and the skilling and employment strategies to meet this demand.

The Taskforce members are:

- Greg Lane, Queensland Resources Council (QRC)
- Ross Williams, BHP Billiton
- Jim Knudsen, Queensland Gas Corporation
- Fiona Harkness, Bechtel Australia
- Catherine O’Sullivan, Department of Education, Employment and Workplace Relations (DEEWR)
- Rod Camm, Skills Queensland
- David Hourigan, Department of the Premier and Cabinet
- Deb Daly, Department of Education and Training (DET)
- Jamie Merrick, Department of Employment, Economic Development and Innovation (DEEDI)
- Dan Hunt, Department of Employment, Economic Development and Innovation (DEEDI)

Successful implementation of the Plan will require an ongoing, shared responsibility between government and industry, as well as a commitment by all parties to implement the initiatives outlined.
Executive summary

The resources sector is expected to grow at an unprecedented rate over the next decade. Research commissioned by the Queensland Resources Council (QRC) has identified that approximately 40,000 construction and operations jobs will be created and sustained through to 2020 via projects valued at $142 billion (Deloitte Access Economics 2011, p. 6).

With significant resources growth projected across Australia, particularly in Western Australia, these projects will compete for labour. They will also compete for workers in those Queensland regional communities where the developments are located.

The success of the Work for Queensland Mining and Gas Jobs Expos, attended by 24,000 Queenslanders, highlights the challenge of matching the supply of potential labour from the (mostly) east coast of Queensland to jobs in regional and remote localities.

While industry is seeking maximum flexibility to recruit and mobilise labour, government and communities rightly expect to maximise the jobs offered to Queenslanders—an outcome also supported by industry.

The Resources Skills and Employment Plan proposes initiatives to better understand the workforce needs of the resources industry, and to maximise the opportunities for the state’s workforce and jobseekers to secure jobs within it. The plan proposes initiatives to:

- provide a better understanding of industry needs
- build the workforce in targeted communities
- increase workforce participation
- maximise skills development in mining and gas operations and construction.

The scale of developments, particularly over the next five years, necessitates new approaches, as well as boosting existing activities. Some of these will make an immediate difference, while a number of longer-term initiatives are also proposed.

The Plan identifies that there is a real opportunity to build on the momentum gained from the Mining and Gas Jobs Expos. To underpin this opportunity, better information on the skill and job requirements of the industry will be required, as well as ongoing efforts to inform workers and jobseekers of the available jobs.

Noting there is likely to be significant professional and para-professional jobs growth, the Plan articulates the need to consider new job and skilling pathways, and to ensure there is capacity to deliver the necessary training. Given the longer-term growth prospects for the industry, the Plan highlights the need to strengthen initiatives, such as the Queensland Minerals and Energy Academy (QMEA), which link school students to the industry.

Significant action is required to boost the trades necessary to underpin the growth of the industry and meet the needs of other businesses and industries. New initiatives are proposed to enhance trade training in key occupations, and to put in place measures to cross-skill and enhance the skills of existing tradespersons. To meet the peak demands of the industry, it is proposed government and industry should act to create additional apprenticeships in targeted occupations.

The growth in semi-skilled jobs will provide the greatest opportunity to build pathways and link current jobseekers to the construction and operational jobs provided by the industry. A greater targeting of the Queensland Government’s Skilling Queenslanders for Work programs and integration with the relevant Australian Government initiatives are proposed. A key to the success of these initiatives must be leadership by the industry in the identification and development of programs.

Acknowledging the need to attract additional workers to the industry and regional communities, the Plan proposes actions to boost participation, including women and Indigenous persons, and to maximise the regional benefits arising from skilled migration programs.
During 2009–10, the mining sector accounted for 10.5 per cent of Queensland’s economic activity, and employed an average of 43,000 people. These numbers are forecast to grow due to increasing investment in coal mining and the development of coal seam gas-liquefied natural gas projects.
Major projects

Along with major expansions planned across the state, major new resource projects are being established in the Northern Bowen Basin and the Galilee Basin. In the Northern Bowen and Galilee Basins, there are 16 current coal operations, nine proposed expansions, 15 proposed new coal projects, three mine infrastructure projects (railways) and eight support infrastructure projects, including three power stations and one dam (MISC 2011, p. 11).

Coal seam gas exploration and development is occurring in the Darling Downs and South West Queensland region, with downstream processing infrastructure being constructed in Gladstone.

Figure 1: ABARES Locations of Advanced Minerals and Energy Projects

Data from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) confirms increased investment (and investment intent) in Queensland (Figure 1). As at April 2011, there were 28 resources projects at advanced stages of development on the ABARES project priority listing, an increase of over 100 per cent from the October 2010 report. Further, the ABARES less advanced project listing has a further 98 resources sector projects in Queensland currently undergoing feasibility assessments (New et al. 2011, pp. 9–17).
Anticipated workforce

Analysis undertaken for the QRC indicates projects valued at some $142 billion will generate some 40,000 full-time equivalent positions over the period to 2020 (Deloitte Access Economics 2011, p. 6).

As evidenced in Figure 2, initial demand will be for the construction workforce as new projects and supporting infrastructure is developed. As these projects become operational, the demand for the operating workforce increases with a corresponding decrease in demand for construction workers.

This analysis also highlights the following key occupational shortages:

- electricians and instrumentation technicians
- earthmoving plant operators
- welders
- drillers
- mechanical fitters and machinists
- miners (surface and open cut)
- riggers
- steel fixers
- carpenters (formwork).

Figure 2: Employment demand, all survey occupations, operating and construction workforce under a full growth scenario
Work by Energy Skills Queensland (ESQ) focusing on major CSG-LNG projects highlights an operational workforce of some 3000 in 2015 and 3700 in 2020 based on a slow economic growth scenario (ESQ 2009, p. 23). As with the QRC analysis, ESQ highlights expected significant skills shortages across a range of professional, technical, skilled and semi-skilled occupations, including petroleum, chemical, and mechanical engineers and para-professionals, electrical and instrumentation technicians, mechanical and diesel technicians, and drilling assistants (ESQ 2009, p. 10).

Detailed analysis undertaken by Construction Skills Queensland (CSQ) for the construction phase of the CSG-LNG industry indicates some 9000 additional workers are required under a slow-growth scenario. As with the operational workforce, there is strong demand for electrical and instrumentation technicians (500 additional positions), along with some 960 pipeline workers, 340 pipefitters, and 630 welders, which reflects significant pipeline construction activity (CSQ 2010, pp. 4–5).

These workforce requirements need to be considered against the backdrop of other major projects and labour demands in Queensland and other parts of Australia. At the national level, operations jobs will increase from 187,700 in 2010 to 270,600 in 2016. Workers required on short-term construction jobs will increase from 103,000 to 255,000 over the same period (Skills Australia 2011, p. 43).

The Skilled Vacancies Index compiled by the Department of Education, Employment and Workplace Relations (DEEWR) provides seasonally adjusted counts of advertisements in major metropolitan newspapers for selected skilled occupations. Trade vacancies in Queensland have accounted for over half of all skilled vacancies for approximately ten years, and demonstrate the high demand for trade skills.

Replacement demand

While the data above highlights the anticipated jobs growth, consideration also needs to be given to the need to replace workers, including through retirements. The Australian Bureau of Statistics (ABS) has indicated 19,000 replacement job opportunities will occur nationally in mining operations per year (including 3000 retirements). Similar ABS data indicates there will also be about 2000 replacement job opportunities in the oil and gas sector (Skills Australia 2011, p. 43).

Considering particular sectors and occupations, estimates indicate the following annual turnover:

- over 26 per cent in drilling (drillers assistants)
- over 30 per cent in civil construction
- over 30 per cent for managers/mine managers in coal sector
- approximately 50 per cent for statutory officials in the metalliferous sector
- over 30 per cent for fly-in fly-out workers (twice the rate of other employees) (Skills Australia 2011, p. 42).
Impact on regional communities

The growth anticipated for the resources sector in Queensland will also create significant labour demand pressures beyond the sector. There will be particular pressures on those communities where projects are located, as they compete with local and regional business and industry for workers.

The Surat Basin Workforce Development Plan highlights the regional workforce impacts from anticipated growth in the Surat Basin. That report focuses attention on the need to ensure strategies are in place to address the workforce needs of other sectors vital to that region. The increase in population means that, by 2031, the Surat Basin will need an additional 5000 hospitality workers, 800 chefs, 5000 education/training staff, and some 9000 health and community service workers (Skills Queensland 2011, pp. 15–17).

The need to consider the impact of resource sector workforce demand on the needs of other industries is particularly relevant in the current low-unemployment environment in many of the communities where major resource project growth is anticipated. Unemployment in Gladstone is currently 5.1 per cent, Mackay 4.3 per cent, Darling Downs 4.4 per cent, and South West 3.5 per cent—the Queensland unemployment rate is 5.5 per cent (ABS 2011).

KEY MESSAGES

There is expected to be approximately 40,000 construction and operational jobs created in the resources sector in Queensland through to 2020. This demand is in addition to the replacement demand estimated to be 20–30 per cent of the workforce per annum.

The additional job requirements of the resources sector will compete with other major projects in Queensland and nationally.

Skill shortages are likely across a broad range of professional and para-professional, skilled and semi-skilled occupations, during both project construction and operational phases. These anticipated shortages will build on some existing shortages in a number of professional and skilled occupations at the state and national levels.

Resource labour demands will have a particular impact on a number of regional communities, as local and regional businesses compete with projects for workers. Existing low levels of unemployment in a number of these communities will exacerbate this problem.
PART 2: Responses

Australia is presently enjoying a once-in-a-generation resources commodities boom that is forecast to strengthen over the short to medium term.
There is clear evidence that the workforce demands of the resources sector over the coming years will be unprecedented, particularly as approved projects in both CSG-LNG and coal are constructed and commence operations.

To fully capitalise on these opportunities, well-targeted and prioritised action is required to ensure the resources sector can meet its projected skills needs, and mitigate any adverse impacts on national, state and regional economies.

While action is underway across government and industry, the scale of the expected demand and skill shortages means that some existing skills and employment initiatives will need to be enhanced, as well as new approaches developed. It cannot be “business as usual” if this growth is to be realised and the opportunities for Queensland workers and jobseekers maximised.

Underpinning the effectiveness of these initiatives is the need for ongoing understanding of the workforce demands, as projects move from construction to operations and new projects emerge. Identified initiatives need to consider not only the skilling or training of additional workers in key occupations, but also the need to match the supply of workers to the labour demands of the industry, and at the same time regionally prepare communities most impacted by strong resources sector growth.

If Queensland jobseekers are to share in these new opportunities, there will need to be additional efforts to boost workforce participation, including amongst those who are disadvantaged in the labour market. In summary, the Plan proposes initiatives to:

- provide a better understanding of industry need
- build the workforce in targeted communities
- increase workforce participation
- maximise skills development in mining and gas operations and construction.

These initiatives are outlined below and summarised in Attachment 1.

**A better understanding of industry need**

While the industry and government have done considerable work, one of the key challenges is building an ongoing understanding of the individual and cumulative workforce impact of major resource projects. This information is required by: jobseekers making decisions about a career in the industry; education and training providers seeking to gear up for growth opportunities; and government and industry funding and program support.

As the National Resources Sector Employment Taskforce (NRSET) report highlighted, there is a requirement for better project data to underpin strategies to respond to the workforce needs of the industry (NRSET July 2010, p. 45). To support this need, the Coordinator-General should review Social Impact Management Plan requirements for major projects to obtain better data.

The Coordinator-General should review Social Impact Management Plan requirements for major projects to ensure appropriate workforce data is captured

This approach will only provide data and information for proposed projects subject to Social Impact Management Plan requirements. To support a longer-term understanding, there is a need for the industry, through the QRC, to gather data and information on prospective projects over a 10-year horizon.

The Queensland Resources Council to undertake an annual update of its Growth Outlook Study

The recent Mining and Gas Jobs Expos highlighted the strong interest from jobseekers in obtaining information on employment opportunities and skilling pathways for the resources sector. The success of the Expos highlights the challenge of matching the supply of potential labour to jobs in the industry.

As the pathway to the industry is often unclear, it is proposed that Skilling Solutions Queensland, the Queensland Government’s skilling information and assessment service, be enhanced to provide specialist resources sector skilling information and assessments, including a mobile assessment service.

Skilling Solutions Queensland to provide a specialist resources sector skilling information and assessment service
Build the workforce in targeted communities

Following on from the Expos on the Gold and Sunshine Coasts, Wide Bay, Whitsundays and Cairns, the challenge is to refocus or initiate skilling and other support activities that assist workers and jobseekers in these communities to access opportunities in the resources sector. While governments can play an important role in providing skilling and other preparatory programs, it also requires a commitment from the industry to support these programs through appropriate recruitment strategies.

The Australian Government has established a Fly-In Fly-Out Coordinator (FIFO) in Cairns to help link workers in that region to resource sector opportunities, as well as announcing funding for four additional positions in other locations around Australia. Additional coordinators could be located on the Gold Coast and in the Sunshine Coast/Wide Bay region.

**Additional resources sector Coordinators to be considered for the Gold Coast and Sunshine Coast / Wide Bay**

There is also a need for ongoing mechanisms to ‘link’ jobseekers to the opportunities in the industry. The Queensland and Australian Governments need to ensure that existing networks in those communities—such as Fly-In Fly-Out Coordinators, Regional Development Australia (RDA), local DEEDI Employment officers, Jobs Services Australia providers, Australian Government’s Skills Connect—build ongoing links with the resources sector and prioritise available training and employment support to respond in a coordinated way to opportunities for workers and other jobseekers.

**Ensure employment and skills networks in targeted communities are linked to resource sector opportunities**

Part 1 of this paper highlighted the potential impact of the growth in the resources sector on regional communities adjacent to hosting these developments. While work is underway through the Surat Basin Workforce Development Plan and other initiatives to respond to the needs of the Surat Basin region, comprehensive and integrated workforce development approaches are also required in Gladstone and surrounds, as well as communities supporting the Northern Bowen and Galilee Basin developments. This latter work should include the workforce impacts for the Mackay region.

**Implement workforce development strategies for Gladstone and the communities supporting the Bowen and Galilee Basin developments**

To support regional communities impacted by growth in the resources sector, there is a need to ensure that skilling strategies include a focus on addressing the supply chain and local and regional skill needs.

**Target skilling programs to meet the supply chain, and local and regional skill needs in communities impacted by strong resource sector growth**
Increase workforce participation

Part 1 of the Plan highlighted the unprecedented growth expected in the industry to 2020 against a background of existing low levels of aggregate unemployment and skill and labour shortages. Boosting workforce participation will help to ensure there are workers to meet the needs of the industry, and local and regional communities. Initiatives such as Skilling Queenslanders for Work need to be prioritised to support these opportunities.

Skilling Queenslanders for Work programs to be prioritised to support resource sector, and local and regional employment opportunities

Queensland TAFE Institutes play an important role in assisting jobseekers through its pre-employment and other preparatory programs. There is an opportunity to target these programs to the needs of the resources sector and those industries that will support the expected growth.

TAFE Queensland to prioritise its pre-employment and entry level programs.

Women

Women represent around 18 per cent of the minerals industry workforce. However, they represent just over three per cent of all employees at mine sites and minerals processing operations (NRSET March 2010, p. 29). Women comprised 13.4 per cent of the construction workforce (CSQ 2010, p. 38).

There are challenges associated with increasing women’s participation, including inflexible work arrangements, remoteness, and removal from families. Expansion of programs such as the Queensland Government’s Women in Hard Hats to more participants and other industry partners is one way of addressing skills and gender discrepancy.

QRC’s established Women in Resources Action Plan (WRAP) has achieved growth in women’s participation in non-traditional roles in the sector from six to eleven per cent since 2006. The QRC has recently endorsed a new target of 20 per cent by 2020. To assist in meeting this target, further expansion of actions under WRAP is recommended including:

- expansion of QRC Women in Engineering Queensland (WEQ) to other in demand occupations including geologists/geophysicists
- expansion of the 4Girls2 program into each QMEA school
- establishment of a formal mentoring program for women in the sector.

Indigenous

Indigenous people are significantly under-represented in the resources sector. Research by the Minerals Council of Australia estimates over 60 per cent of minerals operations in Australia have Indigenous neighbours, but Indigenous Australians represent only five per cent of the mineral sector workforce (NRSET March 2010, p. 31).

There are significant barriers to recruiting and employing Indigenous people in the sector. Proven strategies to address these barriers and create sustainable employment opportunities include:

- funding Indigenous mentors to assist Indigenous employees with workplace integration and meeting employer expectations
- pre-employment programs linked to a job upon completion
- job-ready programs with a focus on literacy and numeracy training.

The QRC, the Queensland Government, and the Australian Government are signatories to a Memorandum of Understanding (MOU) to increase Indigenous employment and economic participation in the Queensland resources sector. This provides the ideal mechanism to enable further joint government/industry measures.

Through the QRC-Government MOU, expand the employment opportunities provided to Indigenous people

Skilled migration

The role of skilled migration is to fill genuine gaps in the labour market, after first considering options to improve the participation and skill levels of Queenslanders. It is clear that the skill requirements of the industry will need to be supplemented by migration, particularly for those technical and professional occupations required during the construction phase. The aim should be to ensure industry works with governments to develop complementary strategies to support local skills and employment opportunities. Gaps in local supply will require a well-targeted mix of temporary and permanent skilled migration that promotes development and maximises employment opportunities for Queenslanders.

Targeting skilled migrants to the regional areas where Queensland’s resource projects are occurring is challenging. Acknowledging this, the recent Federal Budget contained several new initiatives to assist targeted employer sponsorship, including Enterprise Migration Agreements and Regional Migration Agreements. There is an opportunity to ensure these agreements maximise the benefits for regional communities.
The Department of Employment, Economic Development and Innovation (DEEDI) should work with the Department of Immigration and Citizenship (DIAC) to put in place the arrangements for these new agreements in Queensland.

**Work with the Department of Immigration and Citizenship to put in place appropriate arrangements for Enterprise and Regional Migration Agreements**

Skilled migrants often face difficulty adjusting to the specific requirements of their professions or trades. Settlement support is an effective tool to both attract and retain migrants. There are opportunities for both the Queensland Government and industry to build on current migration attraction and retention strategies.

Approximately half of those arriving on skilled migration programs are secondary applicants or dependents. Many of these are already highly skilled, while other secondary visa holders could be encouraged into the labour market with appropriate support. These individuals represent an available skills and labour source for communities that could be included in strategies for meeting workforce needs. This may include increased access to workforce participation programs, particularly in regional areas.

**Expand settlement support and workforce participation programs for migrants**

**Strengthened EIS requirements**

To receive approval under current Environmental Impact Statement (EIS) arrangements, project proponents are required to outline mitigation strategies against a range of environmental and social impacts. The Social Impact Management Plan element includes workforce management plans.

These workforce management plans should consider skills needs and shortages, and detail strategies to address these skills needs, including support for increased local or regional workforce participation. Through analyses of regional labour markets and assessment of project skill requirements, proponents should develop strategies and plans that will meet project needs, address skill gaps and shortages, and support regional communities. These plans should:

- support local skills and employment
- support *Work for Queensland* priorities in connecting jobseekers from areas of high unemployment to job opportunities
- identify other labour sources from around Queensland and Australia
- clearly quantify skills gaps that will need to be met through targeted migration strategies.

**The Coordinator-General to strengthen the employment and skilling requirements of Social Impact Management Plans**
Maximise skills development in mining and gas operations and construction

Part 1 of this report highlighted that skill shortages are expected across a broad range of professional, para-professional, skilled and semi-skilled occupations. This analysis, together with industry advice, indicates a number of areas where priority action is required.

Professions and para-professions

There is a need for additional professionals, including engineers (especially electrical engineers), across most disciplines. This need has also been identified through the NRSET report with work underway nationally to strengthen industry links with universities and to increase the number of engineering and geoscience graduates.

Funding for the higher education sector is the responsibility of the Australian Government. From 1 July 2012, university places will be funded on demand for particular courses. To encourage growth in resources sector professions, industry is encouraged to engage with the higher education sector to influence places in courses such as engineering.

Taking the longer-term perspective, it is important that efforts are made to boost the uptake by high school students of subjects that support a transition into professional and para-professional qualifications. The promotion of resources sector careers to high school students and the opportunity to enhance the work of the Queensland Minerals and Energy Academy (QMEA) to support students to undertake relevant programs should be pursued. An initial focus should be on those communities that hosted the Work for Queensland Expos in 2011.

Electrical engineers

Expand the Queensland Minerals and Energy Academy on the Gold and Sunshine Coasts, Wide Bay, Whitsundays and Cairns

Growth opportunities in the para-professions highlight the need to ensure there are the pathways and capacity to skill the required workers. While there are apprenticeship and traineeship pathways for tradespersons, pathways to the para-professions are limited. To meet the need for additional para-professionals, programs such as cadetships and associate degrees should be developed in engineering, geosciences, and surveying. TAFE/registered training organisation and university partnership models for the delivery of such courses should be explored.

Develop additional pathways for para-professionals in engineering, geosciences, and surveying

These efforts need to be matched by training provider capacity to deliver these programs. SkillsTech Australia and Santos, for example, have entered into a partnership to develop a specialised Coal Seam Gas and Gas Transmissions Pipeline Operations Training Centre to build its workforce. The Department of Education and Training needs to work with industry to put in place a coordinated Queensland resources sector training capacity incorporating public and private registered training organisations to ensure that the appropriate skilling infrastructure is available.

Establish a networked resources sector training capacity

A key issue arising from the growth of the coal mining sector is the requirement for additional statutory positions. Work by the Mining Industry Skills Centre on the growth in the Northern Bowen and Galilee Basins estimates an additional 127 positions will be required by 2014–15 (MISC 2011, p. 27). The Mines Inspectorate, Board of Examiners, unions and industry need to develop strategies to meet the additional positions required by the industry.

Develop strategies to meet the need for additional mining statutory positions
Trades and semi-skilled occupations

Analysis of the needs of the resources sector workforce indicates significant demands for trade and related skilled occupations—both during construction and operations. Typically, many of these occupations, such as electricians, welders and diesel fitters, are trained through an apprenticeship. The apprenticeship system is well regarded and produces quality employment outcomes. However, the current trade training system is simply not delivering the number of tradespeople that will be required in the future across all industry sectors, including the resources sector.

This concern is heightened by a number of factors, including:

- demographic change—many experienced tradespeople are nearing the point of retirement
- insufficient employers are offering young people the opportunity to undertake or complete a trade
- the apprenticeship pathway is predominantly designed to assist young people to enter the labour market which restricts access for a significant number of capable older workers or career changers seeking to enter trade occupations.

The need to protect elements of the current apprenticeship and traineeship pathway is acknowledged, particularly those that industry, enterprises, employers, and employee representatives consider critical. Of equal importance is the need for the apprenticeship pathway to evolve with the needs of the labour market to ensure that the future of the trades in Queensland remains strong.

To ensure trade-based labour needs can be met, new approaches and skilling pathways must be explored. It is, therefore, appropriate and timely to consider options where the resources sector, and major project proponents, target occupations that will be required in high numbers in the future, and subsidise existing manufacturing and construction industry employers for training and wage costs incurred through the engagement of additional or surplus apprentices through arrangements include group training.

Government and industry to sponsor additional apprentices through group training arrangements

The National Apprenticeship Program (NAP) is another example of a new approach. The Program is an adult apprenticeship program for the resources sector that seeks to harness the relevant skills and experience that adult workers can bring to a trade. The program uses a combination of a robust upfront assessment process and recognition of prior learning (RPL) of 40 per cent of trade competencies to enable participants to graduate after 18 months. Bechtel Australia is using the Program to source 400 adult apprentices to work on the construction of three LNG plants in Queensland. This approach needs to be more widely applied across a range of trades and locations.

Governments and industry to consider opportunities to expand the National Apprenticeship Program

Other strategies to boost and accelerate the training of key trades could include streamlining the institutional or college component of apprenticeships, and the targeted use of pre-apprenticeship programs where they are directly supported by industry.

On-the-job training is a fundamental component of skills acquisition and knowledge. Many industry sectors and employers regard the on-the-job training component as the distinguishing feature that links workplace training to quality and industry relevance. Accordingly, while there is limited support to ‘institutionalise’ the apprenticeship pathway, there is recognition that much of the first year of the apprenticeship is about learning the basics. This includes occupational health and safety, familiarity with tools, understanding the industry, and foundation skills. During this time, it is understood that the apprentice’s productivity will generally be lower. However, some individuals have the ability to undertake more intensive off-the-job training to complete elements of their training sooner.

Introduce an institutional pathway that provides full-time training as a precursor to commencing an apprenticeship, with industry committing to employ graduates
In addition to the apprenticeship pathway, there are a significant number of existing semi-skilled workers with no formal qualifications. These workers, and their skills, could be valuable additions to the resources sector with specific skills interventions. There needs to be further development of skills recognition pathways that encourages and assists existing workers across industries to formally recognise their existing skills and pursue the remaining requirements to achieve a trade qualification.

Skills Queensland is proposing the development of new trade training pathways to tap into the pool of adult workers and career changers looking to pursue a trade career. Given the anticipated demand for skilled labour for resources projects, and the lead times associated with training under the apprenticeship pathway, this approach may prove to be an effective response. This complementary approach to traditional apprenticeship training entails:

- Up-front skills assessments for existing workers over 21 years, to allow employees with relevant industry experience, or commensurate life skills, to undertake a dedicated recognition of prior learning (RPL) process.
- A detailed training plan outlining the remaining ‘gap training’ to achieve the full trade qualification as soon as practicable.

**Implement a responsive, up-front skills assessment process for existing workers over 21 years of age**

While acknowledging the relevant skills held by existing workers, opportunities for cross-skilling should also be considered in areas such as welding, pipefitting, carpentry (formwork), and linespersons.

**Introduce cross-skilling programs for those trades where significant shortages are identified**

Those semi-skilled occupations in demand generally require less skills development. The major challenge is to ensure that the skills provided target the needs of employers and align with their recruitment cycles.

It is in relation to these semi-skilled occupations that the greatest scope is provided to build the pathway for jobseekers through tailored labour market programs, including the *Skilling Queenslanders for Work* initiative. This potential is highlighted by the recent work of Energy Skills Queensland in developing and tailoring a drilling program targeted to the needs of the industry.

**Develop and implement skilling programs in key semi-skilled occupations including drilling, welding, process plant operations and rigging and steel fixing**
References


## Attachment 1: Actions table

<table>
<thead>
<tr>
<th>Objective</th>
<th>Actions</th>
<th>By whom</th>
<th>Timeframes</th>
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<tbody>
<tr>
<td><strong>A BETTER UNDERSTANDING OF INDUSTRY NEED</strong></td>
<td>The Coordinator-General should review Social Impact Management Plan requirements for major projects to ensure appropriate workforce data is captured</td>
<td>Coordinator-General</td>
<td>July 2012</td>
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<td>Queensland Resources Council to undertake an annual update of its Growth Outlook Study</td>
<td>QRC</td>
<td>Annual</td>
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<td>Skilling Solutions Queensland to provide a specialist resources sector skilling information and assessment service</td>
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<td>July 2012</td>
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<td><strong>BUILD THE WORKFORCE IN TARGETED COMMUNITIES</strong></td>
<td>Additional resources sector Coordinators to be considered for the Gold Coast and Sunshine Coast/Wide Bay</td>
<td>DEEWR</td>
<td>March 2012</td>
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<td>Ensure employment and skills networks in targeted communities are linked to the resources sector opportunities</td>
<td>DET, DEEWR, DEEDI</td>
<td>July 2012</td>
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<td>Implement workforce development strategies for Gladstone and the communities supporting the Bowen and Galilee Basin developments</td>
<td>Skills Queensland</td>
<td>December 2012</td>
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<td></td>
<td>Target skilling programs to meet the supply chain, and local and regional skill needs in communities impacted by strong resource sector growth</td>
<td>DET, DEEWR, DEEDI</td>
<td>March 2012</td>
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<td><strong>INCREASE WORKFORCE PARTICIPATION</strong></td>
<td><em>Skilling Queenslanders for Work</em> programs to be prioritised to support resource sector, and local and regional employment opportunities</td>
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<td>March 2012</td>
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<td>TAFE Queensland to prioritise its pre-employment and entry level programs.</td>
<td>DET</td>
<td>Until June 2012</td>
</tr>
<tr>
<td></td>
<td>Expand the activities of the Queensland Government’s <em>Women in Hard Hats</em> and the QRC’s <em>Women in Resources Action Plan</em></td>
<td>QRC, DoC, DET, DEEWR</td>
<td>June 2012</td>
</tr>
<tr>
<td></td>
<td>Through the QRC-Government MOU, expand the employment opportunities provided to Indigenous people</td>
<td>DEEDI, DEEWR, QRC</td>
<td>July 2012</td>
</tr>
<tr>
<td></td>
<td>Work with the Department of Immigration and Citizenship to put in place appropriate arrangements for Enterprise and Regional Migration Agreements</td>
<td>DEEDI, DEEWR, QRC</td>
<td>March 2012</td>
</tr>
<tr>
<td></td>
<td>Expand settlement support and workforce participation programs for migrants</td>
<td>DEEDI</td>
<td>July 2012</td>
</tr>
<tr>
<td></td>
<td>The Coordinator-General to strengthen the employment and skilling requirements of Social Impact Management Plans</td>
<td>Coordinator-General</td>
<td>July 2012</td>
</tr>
<tr>
<td>Objective</td>
<td>Actions</td>
<td>By whom</td>
<td>Timeframes</td>
</tr>
<tr>
<td>-----------</td>
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<tr>
<td>MAXIMISE SKILLS DEVELOPMENT IN MINING AND GAS OPERATIONS AND CONSTRUCTION</td>
<td>Expand the Queensland Minerals and Energy Academy on the Gold and Sunshine Coasts, Wide Bay, Whitsundays and Cairns</td>
<td>Skills Queensland, QRC</td>
<td>July 2012</td>
</tr>
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<td></td>
<td>Develop additional pathways for para-professions in engineering, geosciences and surveying</td>
<td>DET, Skills Queensland</td>
<td>July 2012</td>
</tr>
<tr>
<td></td>
<td>Establish a networked resources sector training capacity</td>
<td>DET, QRC, Skills Queensland</td>
<td>From July 2012</td>
</tr>
<tr>
<td></td>
<td>Develop strategies to meet the need for additional mining statutory positions</td>
<td>DEEDI, QRC, Industry, Mines Inspectorate, Unions</td>
<td>March 2012</td>
</tr>
<tr>
<td></td>
<td>Governments and industry to sponsor additional apprentices through group training arrangements</td>
<td>DET, Skills Queensland, DEEWR, Industry</td>
<td>March 2012</td>
</tr>
<tr>
<td></td>
<td>Government and industry to consider opportunities to expand the National Apprenticeship Program</td>
<td>Skills Queensland, DEEDI, East Coast</td>
<td>July 2012</td>
</tr>
<tr>
<td></td>
<td>Introduce an institutional pathway that provides full-time training as a precursor to commencing an apprenticeship, with industry committing to employing graduates</td>
<td>Skills Queensland, DET, Industry</td>
<td>July 2012</td>
</tr>
<tr>
<td></td>
<td>Implement a responsive, up-front skills assessment process for existing workers over 21 years of age</td>
<td>DET</td>
<td>September 2012</td>
</tr>
<tr>
<td></td>
<td>Introduce cross-skilling programs for those trades where significant shortages are identified</td>
<td>Skills Queensland, DET</td>
<td>From February 2012</td>
</tr>
<tr>
<td></td>
<td>Develop and implement skilling programs in key semi-skilled occupations including drilling, welding, process plant operations, rigging and steel fixing</td>
<td>Skills Queensland, DET, CSQ</td>
<td>From February 2012</td>
</tr>
</tbody>
</table>
Attachment 2: Priority occupations and responses

The taskforce has identified the following priority occupations and some immediate responses to maximise skills development for participation in the resources sector for Queensland workers.

**Mining operations**

**Electrical distribution trades workers**

**Workers required by 2015: 1500**

**Immediate responses:**
- Fund Energy Skills Queensland to cross-skill 120 existing resources workers to upgrade their skills through delivery of Certificate IV in Electrical – Instrumentation in 2012.
- Co-funding the cross-skilling of an additional 100 existing resources workers per year in Certificate IV in Electrical – Instrumentation in 2013 and 2014.
- Implement alternative apprenticeship training initiatives.

**Metal fitters and machinists**

**Workers required by 2015: 3934**

**Immediate responses:**
- Implement alternative apprenticeship training initiatives.

The graphs are taken from the Queensland Resources Council’s *Growth Outlook Study*. 

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**Non-resources**

**Resources (Base)**

**Resources (Survey results)**
Other mobile plant operators

Workers required by 2015: 1500
Immediate responses:
- Train new entrants in Certificate III in Process Plant Operations, with industry providing advice on numbers to be trained.

Drillers, miners and shot firers

Workers required by 2015: 13,157
Immediate responses:
- Expanding Energy Skills Queensland Coal Seam Gas Drilling Program to other locations.
- Fund Mining Industry Skills Centre to deliver training to 1100 people with the following qualifications: Certificate II in Drilling Operations; Certificate II in Drilling Oil/Gas (on Shore); Certificate II in Surface Extraction Operations; Certificate II in Underground Mining.
- Investing $100,000 with AJ Lucas Technologies Pty Ltd to train 40 people in a range of qualifications from Certificate III to Diploma in Drilling Operations.
- Train new entrants in the aforementioned mining qualifications with industry providing advice on numbers required.
- Fund training in 2013 and 2014 for existing resources workers in higher level qualifications per year including: Certificate IV in Underground Coal Operations; Certificate IV in Surface Extraction Operations; and Certificate IV in Drilling Operations. This will enable performance of higher level jobs. Industry providing advice on numbers to be trained.
Construction

Structural steel and welding trades workers

**Workers required by 2015: 1120**

**Immediate responses:**
- Industry and government to fund SkillsTech Australia to deliver institutional training in welding with industry providing advice on numbers to be trained.
- Implement alternative apprenticeship training initiatives.

Carpenters (Formwork)

**Workers required by sector by 2015: 6475**

**Immediate responses:**
- Construction Skills Queensland, working with industry, to develop a post-trade cross-skilling program which delivers skills sets to transition residential and commercial construction workers into the resources sector with industry co-contributing to the funding of the program.
- Implement alternative apprenticeship training initiatives.

Structural steel construction workers

**Workers required by 2015: 3,394**

**Immediate responses:**
- Training new entrants in either Certificate III in Rigging or Certificate III in Steelfixing with industry providing advice on numbers to be trained.
Attachment 3: Projected employment by occupations

The Queensland Resources Council’s *Growth Outlook Study* highlighted projected employment growth in Queensland for a range of resources sector occupations. This occupational data demonstrates total demand identified by survey respondents. The following tables indicate growth across the range of occupations included in the *Growth Outlook Study*.

### Business administration managers

![Business administration managers graph]

### Construction managers

![Construction managers graph]

### Engineering managers

![Engineering managers graph]

### Production managers

![Production managers graph]

### Cartographers and surveyors

![Cartographers and surveyors graph]
Truck drivers

Concreters

Other construction and resources labourers

Non-resources
Resources (Base)
Resources (Survey results)
People: Skills develop people. Investing in the skills of our people, is investing in our future.

Potential: Skills realise potential. Our commitment is to ensure individuals and industries have access to the skills they need to realise their potential.

Prosperity: Skills underpin prosperity. We work to collaboratively accelerate and drive potential towards prosperity. Our vision for prosperity extends from the individual through to industry to position Queensland for the future.