TRAINING & SKILLS COMMISSION

Better Skills, Better Work, Better State

Skills for Jobs

PRIORITIES FOR DEVELOPING SOUTH AUSTRALIA'S WORKFORCE

The Training and Skills Commission's Five Year Plan for Skills and Workforce Development

MAY 2009

Government of South Australia
Training and Skills Commission

Office of the Training
and Skills Commission

Department of
Further Education,
Employment, Science
and Technology

Level 4
11 Waymouth Street

GPO Box 320

Adelaide SA 5000
Tel: (08) 8226 3462
Fax: (08) 8226 1523

www.tasc.sa.gov.au

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Appendix 2: *Industry Profiles and Priorities* and Appendix 3: *Regional Profiles and Priorities* are available online at **www.tasc.sa.gov.au**

EXECUTIVE SUMMARY

Creating a highly skilled workforce in South Australia is fundamental to the development of a globally competitive economy and a socially inclusive community.

The challenge is to increase substantially the proportion of South Australians with higher level qualifications; broaden and deepen our skill base; and significantly improve employment participation.

These are the three key goals that the Training and Skills Commission has identified as being essential to helping South Australia transition to a new industry structure and to utilising the talents of all more equitably.

In the current economic climate it would be easy to step back from the challenges we face, but the Commission supports the view of the Economic Development Board (EDB) that there is an opportunity to prepare for a future of sustained economic development and growth if the State increases its investment now in its skills base.

While the short term outlook for the economy is clouded by uncertainty, the medium term outlook is more positive. The Commission estimates that over the next five years growth in the South Australian economy – combined with replacement jobs – will create about 134,000 job openings.

Our modelling suggests that the most job openings – 32,000 or almost a quarter – will be in the **business and financial services** sector. Another 25,000 (20%) are likely to be in **wholesale, retail and personal services**; and around 13% (18,000 job openings) in **health and community services**. The remaining 60,000 job openings are spread across the other 13 occupational groupings used as the basis for our planning.

To meet the projected industry demand for skills, and to up-skill the existing workforce, it is projected that South Australia will need to deliver 260,000 post school education and training qualifications over the next five years. The greatest areas of demand are for Certificate III level qualifications (86,000) and Bachelor degree or higher qualifications (67,000).

Our analysis suggests that the publicly funded education and training system is likely to supply roughly the quantum of qualifications needed to meet currently identified industry demand, however there may be a need to redistribute funding away from Certificate II to Certificate III and Diploma/Advanced Diploma level to meet the demand for higher level skills. In doing this, equity considerations will need to be borne in mind. Our modelling also suggests that there will be a need to re-align resources between different occupational sectors.

Responding to industry's current projected skills demands is, however, unlikely to deliver the quantum of qualifications needed to achieve the targets set by Governments for participation and attainment levels in tertiary education and training, and increased employment participation. Our initial modelling indicates that significant additional completions will be required to meet these targets.

Increasing post school educational participation by the magnitude required to meet the targets will not only require increased investment, it will also depend on other improvements in the system, including raising Year 12 retention rates, increasing enrolments in science, technology and maths in the schooling sector, improving access to tertiary study for under-represented groups, and improving pathways between schooling and tertiary education.

There is an urgent need to increase completion rates, particularly within the vocational education and training (VET) sector.

Our consultations with industry stakeholders during the preparation of this Plan identified a number of common themes and priorities. All industries that we spoke with stressed the need to retain skills during the current downturn and to use the opportunity to invest in training.

Industry has identified a general shift to higher level skills but also emphasised the importance of core generic transferable skills. Literacy and numeracy skills and science and maths are seen as high priorities. Other common issues raised in our consultations were:

- the need for clearly articulated career paths, and the importance of high quality careers advice
- the need for improved collaboration and co-ordination between government and industry; and between education and training sectors
- the need for more direct involvement of industry in workforce planning and development, supported by independent advice
- the difficulties that industry is experiencing in attracting and retaining skilled workers – despite the temporary reprieve provided by the economic downturn
- the opportunities to attract potential workers from under-represented groups
- concerns about the quality of training outputs, and the complexity of the current system.

Industry has also provided us with a range of potential workforce development strategies, which we will feed in to the Government's resource allocation process for skills and workforce development.

The Commission supports the immediate strategies the State Government has put in place to complement and leverage initiatives in the Commonwealth Government's economic stimulus package and recent Budget announcements, which are designed to retain jobs and assist disadvantaged jobseekers.

The Commission also supports the recent establishment of the Youth Compact, which will provide an education and training guarantee to young people under the age of 25. However, we believe that implementing the Compact poses potential risks to meeting our goals and targets for increasing and deepening the State's skills base.

It will be important that there is no substitution of funds which causes other groups of workers and job seekers – particularly the most disadvantaged job seekers – to be excluded from learning and work programs.

There is considerable national attention on reform of skills and workforce development, with consensus on the need for a system which demonstrates higher participation in education beyond the compulsory years; supports the development of workplace innovation capacity; sets national targets for achievement; is demand driven; is better regulated; and has a greater focus on measuring outcomes.

The recent Commonwealth Budget committed to significant reform of the higher education sector – in line with the recommendations of the recent Review of Higher Education. In light of the speed of the changes that are occurring, the Commission believes that South Australia must increase the nature and pace of its reform.

Following consultation with stakeholders, the Commission has identified six key policy issues which affect achievement of the goals and targets for skills and workforce development. The Commission will reach agreed positions on each of these policy issues, and will outline these in the next iteration of the Plan – due in November 2009.

This will involve:

- developing a clear position on the elements of a tertiary education and training system that balances the needs and preferences of students with the future demands of the economy and industry
- examining ways in which the tertiary education and training system can be better integrated to respond to the skilling needs of clients
- identifying what improvements can be made in promoting pathways between elements of the education and training system
- examining the skills required for the 'new economy'
- exploring opportunities for government and industry to work together to better recognise and utilise the skills of the existing workforce
- developing a position and preferred model for quality assurance of the tertiary system in South Australia.

The focus of the November 2009 Plan will be the actions required to ensure the availability of the necessary skills to support the future growth and diversification of the South Australian economy. It will directly inform the Government's resource allocation plan, which will focus on the priorities for publicly funded skills and workforce development.

Chapter 1

INTRODUCTION

South Australia's capacity to respond speedily and appropriately to the challenges and opportunities of the global economy will depend greatly on whether its citizens have the necessary skills to build new enterprises and transform existing industries. For this reason the Commission has developed an initial Five Year Plan for Skills and Workforce Development in South Australia.

This work is a complement to the EDB's 2009 *Economic Statement*, which identifies the opportunities for the South Australian economy over the next seven years and the actions necessary to realise these opportunities. The Commission's aim is to clarify the implications for skills and workforce development of the *Economic Statement's* priorities and to identify the policy questions on which further work is needed if we are to be confident that South Australia has the correct approach to planning, resourcing and delivery of a world class system of skills and workforce development.

The focus of the Commission's work is on what is required in the medium to longer term to build the skills base needed to help the South Australian economy make the transition to a new and transformed industry structure. To increase participation, greater emphasis on better outcomes from the education and training system and more attention to putting in place the conditions which support individuals to re-skill and re-enter the workforce are required. Nevertheless the Commission is well aware of the impact that the global financial crisis is having right now on the labour market and on public funds.

This initial Plan highlights findings to date, makes predictions about requirements for skills in the future and identifies a range of policy issues on which work will be undertaken before November 2009, to support development of the next version of the Five Year Plan.

The November version will be more closely directed to providing advice on priorities for publicly funded skills and workforce development and on the characteristics of the tertiary system in South Australia.

Chapter 2 sets the context for the Commission's work. Chapter 3 provides a quantitative assessment of the workforce needs over the next five years. Chapter 4 qualifies some of the workforce projections through the input provided by industry and summarises key themes and industry suggestions. Chapter 5 outlines the Commission's position on the immediate problems facing the workforce and sets out the six key policy issues to be addressed. Chapter 6 briefly outlines the next stage of the work.

Working with industry

Industry, employer and employee groups have had significant involvement in the planning to date. The Commission met with leaders of the state-based Industry Skills Boards (ISBs) in October 2008; formal consultations were held with representatives from all industry sectors in February 2009; then the Commission met with Chief Executives of the national Industry Skills Councils (ISCs) in April 2009. The Commission met with education and training providers in December 2008.

At the same time, detailed workforce plans for industries with the potential for highest growth – including Defence, Mining, Health and Community Services, Construction, Advanced Manufacturing and Agri-food – were carefully assessed.

Qualitative information gathered through this process is included in Appendix 2 *Industry Profiles and Priorities*, together with a more detailed breakdown of the quantitative modelling results for 16 broad occupational groupings.

This dialogue with industry and other key stakeholders will continue as the Plan is further developed.

Chapter 2

CONTEXT

Creating a highly skilled workforce in South Australia is fundamental to the development of a globally competitive economy and a socially inclusive community.

While the Commission recognises that there are specific challenges resulting from uncertainties associated with the economic downturn, it believes we must invest now in preparation for the upturn. In the current climate it would be easy to step back from the challenges which face us, but there is a longer-term competitive advantage to be gained from investing in skills for our future and reforming the education and training system.

The Commission recognises that the problems facing the workforce require an immediate response. We want to ensure that what is being done now to counter the effects of the economic downturn is consistent with what is required to secure a long term advantage for the State. Given the economic downturn and the closure of some businesses, it is evident that people need to have transferable skills that will lead to jobs in other industries.

The State and Commonwealth Governments have acted quickly to put in place a range of responses to minimise the impact of the global financial crisis on jobs and to increase investment in skills so that we are prepared for the upturn. Employers and unions have been active participants in developing proposals and initiatives to save jobs and to build the skills base during the current economic downturn.

The National Picture

There is national attention on reform of education and training and consensus on the need for a system which demonstrates higher participation in education beyond the compulsory years; supports the development of workplace innovation capacity; sets national targets for achievement; is demand driven; is better regulated; and has a greater focus on measuring outcomes.

The Commonwealth Government has initiated a reform process in partnership with States and Territories to improve national education outcomes through the Council of Australian Governments (COAG). Agreement has already been reached on some areas for reform in early childhood development and education, schooling and skills and workforce development. Most recently, COAG agreed to a Youth Compact to increase young people's engagement with education and training pathways. To meet the challenge of rising unemployment, it has been agreed that every young person will be able to access an education or training place.[1] Participation in education, training or employment will be compulsory for all young people until they reach age 17. Furthermore, COAG's 90% Year 12 or equivalent attainment rate target will be brought forward from 2020 to 2015.

The Commonwealth Government has indicated it will introduce a student entitlement system for higher education, it has set targets for attainment of higher education qualifications and a national regulatory body, and will seek closer alignment of higher education and VET in consultation with States and Territories.

1 All young people (15-24 year olds) will have an entitlement to an education or training place for any government subsidised qualification, subject to admission requirements and course availability but for people aged 20-24 it needs to result in the individual attaining a higher qualification.

The National Picture continued

Skills Australia is undertaking consultations on governance of the tertiary education and training system and reform to regulatory arrangements and funding mechanisms.[2] In its draft proposal, Skills Australia emphasises industry's close involvement in national skills standards and training products and employers' engagement in workplace training. It supports increased contestability to expand training provision, but with a strengthened focus on consistent quality and regulation. It proposes a national approach to regulation, initially led by two separate national regulatory bodies – VET and higher education – but with a merger forecasted once national frameworks for each sector are determined and established.

South Australia

Since the report of the *Skills Inquiry*[3] in 2003, South Australia has placed considerable emphasis on skills and workforce development. Implementation of Statewide employment programs has produced some good results in both workforce participation outcomes and in industry workforce development programs.

The State makes a considerable investment in educating and training. In 2008-09 more than $2 billion has been invested in early childhood education and schooling. Each year $400 million is invested in skills and employment development programs. In 2007, approximately 123,000 students participated in training with a TAFE, private training provider or adult community education provider, and received a public subsidy. A further 51,000 domestic students were studying at university.

The State Government's *Skills Strategy*[4], released in 2008, sets out a program for reform of the publicly funded VET system and outlines targets for major improvement. The targets reflect those in *South Australia's Strategic Plan* (SASP):

- increase the employment to population ratio, standardised for age differences, to the Australian average (T1.12)
- by 2014, equal or better the national average for the proportion of the labour force with non school qualifications (T6.19)
- increase South Australia's proportion of higher education students to 7.5% of the national total by 2014 (T6.20)
- exceed the national average for VET participation by 2010 (T6.21).

The 2008 *Review of Skills and Workforce Development*[5] endorsed the recommendations in the *Skills Strategy* and emphasised that increased employment participation is required for future economic growth.

The challenge for South Australia

The EDB's 2009 *Economic Statement* identifies the priorities for the future development of the South Australian economy and their implications for a broad policy response to the global financial crisis. The core of this response is that the State should invest now in South Australia's future opportunities to ensure it is in the best possible position when the economy begins to recover. Increases in workforce participation, improving the quality and performance of the education and training system and greater productivity through innovation are identified as areas for attention.

2 Skills Australia 2009, *Foundations for the Future*
3 Government of South Australia 2003, *Skills for the Future: Final Report of the Ministerial Inquiry*
4 Government of South Australia 2008, *A Skills Strategy for South Australia's Future*
5 EDB 2008, *Review of Skills and Workforce Development in South Australia*

While the short term outlook for the State's economy is clouded by uncertainty because of national and international economic circumstances, the economic outlook for the longer term appears positive.

The Commission estimates that over the next five years growth in the South Australian economy combined with replacement jobs will create significant employment demands. Notwithstanding the economic downturn, South Australia is likely to have about 134,000 job openings in the period to 2012-13.

However, based on current performance and within current settings it is unlikely that the SASP targets for workforce participation, an increase in the number and level of educational qualifications and better performance against national averages will be met. The gap is significant and is aggravated by the current economic downturn.

The challenge these targets present and the position taken in the *Economic Statement* suggest that there is no time to waste. We must seize opportunities for growth and reform the education and training system to ensure we have the right skills to underpin that growth.

Chapter 3

SKILL NEEDS: DEMAND FOR QUALIFICATIONS

This chapter presents a ***quantitative*** assessment of the workforce challenge facing South Australia over the next five years, related to new opportunities resulting from major projects and the impacts of the ageing workforce. It complements the detailed ***qualitative*** information gathered during industry consultations and presented in **Chapter 4**.

This assessment is based on the results of modelling of future economic growth, labour productivity and employment growth which is consistent with that undertaken by the EDB for its 2009 *Economic Statement* and 2008 *Review of Skills and Workforce Development*. The EDB's estimates for economic and employment growth are ambitious but realistic, and indicate what is possible.

Because of the methodology used for this quantitative assessment, the modelling tends to focus on upcoming projects that are significant in size and captured in major modelling databases. Using this top-down approach means that smaller projects, and projects just recently announced, may not be captured. The modelling results also don't capture any workforce estimates produced as a result of "one-off" workforce planning studies undertaken for particular industry sectors.

Generally the top-down quantitative estimates of the demand and likely supply of training in each sector are broadly consistent with the more detailed qualitative information obtained through the consultations. However, in the next phase of work the Commission will attempt a more detailed integration of the qualitative and quantitative information, particularly for those occupations which have a long training period and where there is not already a good stock of suitably skilled people who are not using their skills to maximum effect.

In the absence of a clear one-to-one link between qualifications and occupational destinations, and in recognition of the significant movement of workers between occupations, the analysis below is presented at a fairly high level of aggregation – across six qualification levels.

Appendix 1 includes more detailed results from the economic modelling which underpins the analysis presented here, including a description of the methodology used.

The Demand Outlook

As highlighted by the EDB, investing in skills, particularly over the next few years when economic and employment growth will be slow and possibly negative, will be critical to ensuring the economy can rebound strongly and that the State's growth potential can be realised. The Commission's focus is on the actions required to ensure the availability of the necessary skills to support future growth and diversification of the South Australian economy.

Over the five year period 2007-08 to 2012-13 it is estimated that growth in the South Australian economy will create 53,000 ***new*** jobs.

The Demand Outlook continued

This *expansion demand* is only part of the challenge – the ageing of the population will also have a significant impact on future demand for labour and skills. While there may be a temporary reprieve due to the global financial crisis, South Australia's demographics are such that, as the population ages, there will be an increasing need to replace workers who retire.

Job openings also occur when people change occupations or leave the workforce for health or other reasons, such as caring responsibilities or studying. Job turnover accounts for a significant proportion of replacement demand for workers.

Over the period 2007-08 to 2012-13, the number of net job openings resulting from *replacement demand* is likely to be in the order of 81,000[6] – considerably more than the number of new jobs created through growth in the economy. Many of the job openings created through turnover or retirement will be filled by existing workers, creating openings at lower skill levels – and opportunities for employers to create job pathways and to redesign jobs.

The combined impact of economic growth plus the need to replace workers who will be leaving the workforce or changing occupations results in estimated *total job openings* over the next five years of around 134,000. This highlights the need to boost labour supply and skill levels in South Australia to capitalise on these opportunities.

This top down modelling suggests that of total job openings over the next five years:

- the most openings – 32,000 or almost one in four – are likely to be in the largest sector, *business and financial services*, which also accounts for about a quarter of total employment and covers occupations such as accountants, bank workers, office managers, HR professionals, general clerks, cleaners, real estate professionals and security officers
- 25,000 (20%) are likely to be in *wholesale, retail and personal services*, which accounts for 13% of total employment and includes sales workers, wholesalers, florists, hairdressers, checkout operators and telemarketers
- 18,000 (13%) are projected to be in *health and community services*, which accounts for 11% of total employment and includes child care workers, social workers, aged care workers, medical and nursing professions and other health professions
- the sectors with occupations associated with manufacturing, cultural and recreational services, primary industries and automotive have fewer than 5,000 job openings each.

A full list of the occupations covered by each sector is included in the Attachment to Appendix 2 at **www.tasc.sa.gov.au**

Identifying the Likely Demand for Skills and Training

Not all of the projected job openings will translate into demand for additional qualifications. Some will be filled by existing workers or people currently outside the labour market who have the required qualifications and skills, including skilled migrants. These workers may have a requirement to have their skills updated because of structural change or new technologies, but this is unlikely to result in the need for a full qualification. In these instances, the achievement of a "skills set" with a formally recognised Statement of Attainment may be sufficient.[7]

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6 Centre for the Economics of Education and Training, (CEET) Monash University

7 *Skill sets* refer to single units or combinations of units which link to a license or regulatory requirement, or defined industry need. A national system has been developed to enable industry endorsement of skill sets within existing Training Packages, which lead to agreed 'job outcomes'. A nationally portable Statement of Attainment has been developed which articulates the skills and competencies gained by individuals through successful completion of skill sets.

Recognition of Prior Learning (RPL) and other formal skills recognition measures should be used to help existing workers gain formally recognised qualifications, particularly where they do not already hold a post school qualification.

Where job vacancies are filled by new labour market entrants, the majority will need some level of formal post school qualifications. This will also help them transition through the labour market.

To capture the likely total demand for qualifications, the skilling requirements of ***new entrants*** (to fill job openings resulting from expansion and replacement demand) and the skill requirements of the ***existing workforce*** have been estimated separately. The methodology used to estimate the future demand for qualifications draws heavily on that developed by Monash University's Centre for the Economics of Education and Training (CEET) and that used in the 2008 EDB *Skills Review*.

Underpinning these estimates is the assumption that skills deepening will continue over the medium term at a similar rate to that observed in the recent past. Recent trends in skills deepening, however, may not be a reliable indicator of future trends. SASP and COAG both have ambitious targets for qualifications achievement. The achievement of these targets would require a substantial increase in the number of education and training places (and the number of completed qualifications) over and above that estimated here. This potential "gap" is discussed later in this Chapter.

To meet the projected industry demand, it is estimated that 96,000 new entrants will need to gain a qualification between 2007-08 and 2012-13. Among these new entrants, just fewer than 40% of projected qualifications will be at the Bachelor degree or higher level, and 27% at Certificate III level. Around equal proportions are projected for Advanced Diploma/Diploma and Certificate IV (12%).

The other key challenge is to refresh and boost the skill levels of the ***existing workforce*** – to lift productivity and enable workers and firms to innovate and move to new growth areas. Projected demand for qualifications from this source totals around 139,000; this comprises 56,000 workers who are ***up-skilling*** (completing a qualification at a higher level than their current qualification) and 83,000 who are gaining a qualification at an equivalent or lower level (referred to as "skills broadening").

Among existing workers, more than one-third of qualifications are projected to be at Certificate III level, 22% at Bachelor degree level or higher and just fewer than 20% at Certificate IV level.

The combined demand for qualifications (from new entrants and existing workers) results in projected ***total demand*** over the next five years for 235,000 qualifications.

The projected demand for qualifications among existing workers, however, represents a continuation of past trends in projecting the demand for formal refresher training and updating of skills for existing workers. But we know that past levels of retraining have not been sufficient, and employment participation has suffered as a result. Australian employers have clearly indicated that there is a need to update workers' skills more often (see AiG 2006 and 2008).

For the purposes of this Plan, it has been estimated that another 25,000 VET training places[8] will be required over the next five years (an average of 5,000 a year) to provide formal refresher training and updating of skills for existing workers (although not all of this refresher training will require a full qualification).[9]

8 The distribution across qualification levels is assumed to be the same as for those existing workers who are engaged in 'skills broadening'.

9 In reality, the demand for refresher training is likely to be much more than this, but what is unknown is the quantum of demand for, and supply of, informal training and/or training which is privately financed. AiG surveys have revealed that the most frequently used method of introducing new skills to existing workers is through informal in-house training sessions. The same research found that employers regarded formal in-house training as the most effective method (AiG 2008).

Identifying the Likely Demand for Skills and Training continued

This results in total projected demand of 260,000 post school education and training qualifications over the next five years – an average of 52,000 per annum. Of this total demand, more than 25% is for Bachelor degree or higher qualifications. However the greatest area of demand is for Certificate III level qualifications – which account for a third of projected industry demand – refer **Table 1**.

Table 1: **Projected Total Demand for Training, 2007-08 to 2012-13**

Qualification Level	
Bachelor degree or higher	67,000
Advanced Diploma/Diploma	42,000
Certificate IV	44,000
Certificate III	86,000
Certificate II	11,000
Certificate I	10,000
Total	**260,000**

Projecting the Supply of Qualifications

The supply of qualifications over the next five years can be estimated by extrapolating recent trends in completions at the VET and higher education levels.

These estimates should be considered indicative only, as there are several limitations associated with them (these are outlined in **Appendix 1**). Most notably, the estimates include ***publicly funded training only***. A significant but unquantifiable amount of training occurs outside of the publicly funded training system. Also, the numbers do not include individuals achieving a Statement of Attainment (recognised skills set).

Based on an extrapolation of recent trends, the South Australian publicly funded education and training system can be expected to produce 186,000 post school qualifications over the next five years.

Not all people who enrol in a course end up completing the course and gaining a qualification, hence the number of commencements required is greater than the number of completions.

Students leave before completing their qualification for a variety of reasons, including: to take up a job; because they have acquired the skills they need (which may be formally recognised through a skill set or Statement of Attainment); because they are not suited to the study; because their employment has been terminated (e.g. in the case of apprentices and trainees); or for reasons relating to their own expectations and personal circumstances. There is very little hard evidence available on the relative contribution of these factors, and further work should be undertaken on the reasons why students fail to complete their studies and how completion rates can be improved.

Within the higher education sector, the completion rate is around 72% nationally.[10] Completion rates are not available for the VET sector, due to the difficulties in tracking students through the system and the significant variance in the length of courses available.[11]

10 Australian Government 2008, *Review of Australian Higher Education*

11 Further, completion rates for VET would be misleading because they would not include successful completion of a Statement of Attainment (skills set) as these are not currently captured in the statistics.

The exception is apprenticeships and traineeships, with the National Centre for Vocational Education Research (NCVER) publishing annual completion and attrition rates. The latest data (published in the 2007 annual statistical report on apprentices and trainees) shows that the completion rate for individual apprentices and trainees who started their training during 2002 was 51% in South Australia, slightly above the national rate of 49.5%.

The completion rate for "traditional trades" in South Australia was 59.3% – ranging from 76.9% for printing trades to 42.7% for food trades. Within non-trade occupations, completion rates ranged from 74.3% for professionals to 25% for advanced clerical, sales and service workers.[12]

Recent trends in supply are not necessarily a good indicator of future trends. For example, in 2008 the Commonwealth Government announced the funding of a significant number of additional training places for the VET sector, through the *Productivity Places Program* (PPP).

The PPP has the potential to significantly increase the number of VET places in South Australia. Based on the current agreement with the Commonwealth Government, it is projected that South Australia could gain around 75,000 additional training places over the next five years – comprising 26,000 places for job seekers and 49,000 places for existing workers.

It should be noted that not all of these places will translate into completed qualifications. There is likely to be wastage from training, some individuals will use more than one place to complete a qualification (to gain a higher level qualifications requires more than one place), and some (particularly existing workers) may use the training to gain a skill set rather than complete a full qualification.

The Commission's analysis assumes that 85% of job seekers and 90% of existing workers will complete their qualification. While these rates are significantly higher than those being achieved for apprentices and trainees currently within the VET system, we are confident of high completion rates – at least over the next few years – for the following reasons.

- For jobseekers, completion of the PPP is part of their agreement with their employment services provider; RTOs will be supporting jobseekers to finish the course in order to receive the completion payment. And in an economic downturn jobseekers are more likely to remain in their course to improve their chances of finding a job on completion.
- For existing workers, participation in the PPP is negotiated with their employer and may be linked to a pay rise or other benefit upon completion. Use of RPL up front will mean that for many students the length of time needed to complete a full qualification is relatively short.

Based on these assumptions we can expect an additional 47,000 completed VET qualifications through the PPP over the next five years. More than one third of the completions are projected to be at Advanced Diploma/Diploma level, with a further 30% at Certificate IV level, 20% at Certificate III level and 15% at Certificate II level.

Combining these estimated PPP qualifications (47,000) with projections of "existing effort" (186,000) results in total projected supply through the publicly funded post school education and training system over the next five years of 233,000.

12 NCVER 2008, *Australian vocational education and training statistics: Apprentices and trainees*

Table 2 below shows the projected demand for qualifications, by qualification level, compared with projected supply over the next five years.

Table 2: **Projected Demand and Supply of Qualifications, 2007-08 to 2012-13**

Qualification Level	Demand	Supply (Publicly Funded)	Imbalance (Demand minus Supply)
Bachelor degree or higher	**67,000**	**62,000**	**5,000**
Advanced Diploma/Diploma	42,000	29,000	13,000
Certificate IV	44,000	41,000	3,000
Certificate III	86,000	59,000	27,000
Certificate II	11,000	35,000	-24,000
Certificate I	10,000	7,000	3,000
Total VET	**193,000**	**171,000**	**22,000**
Total	**260,000**	**233,000**	**27,000**

The modelling suggests that within the ***higher education sector*** there is likely to be a ***shortfall*** of 5,000 qualifications at Bachelor degree level or higher over the next five years, to meet projected industry demand (projected demand for 67,000 degrees compared with projected supply of 62,000). However, the recently announced changes to the higher education system are designed to increase numbers and meet national targets for degree completion. It is also likely that the projections of supply will understate future trends because enrolments tend to increase during an economic downturn, and wastage rates decline (leading to an increase in completed qualifications).

Focusing on the VET sector, there is projected demand for training of 193,000 over the next five years, compared with projected supply of 171,000, giving an estimated imbalance (demand minus supply) of 22,000. Given the margins of forecasting error associated with this type of modelling, this is considered negligible. However, as discussed below, significantly more completions will be required if South Australia is going to achieve agreed SASP and COAG targets.

The projections reveal a significant shortfall at the Certificate III level (of 27,000 qualifications), while the greatest projected oversupply is at Certificate II level (24,000). This suggests that a redistribution of funding between Certificate levels is required. In re-allocating funding, equity considerations and the implications for pathways will need to be borne in mind.

Very recent policy announcements will also impact on demand and supply within the VET sector. The COAG decision to introduce a ***Youth Compact*** for 15 to 24 year olds and a ***participation requirement*** for young people up to the age of 17 is expected to increase demand for training in South Australia significantly. The implications of these policy changes are still being absorbed. When they are incorporated into the demand and supply modelling they will have very significant implications for the priorities and costs of publicly funded provision.

The analysis presented in this chapter suggests that the publicly funded education and training system is likely to deliver roughly the right amount of qualifications required in the economy over the next five years, as currently identified through the modelling. As highlighted above, however, the modelling is unlikely to have captured a number of smaller projects (including those resulting from the Commonwealth's $42 billion economic stimulus plan and Budget commitments) and projects that have been announced very recently.

The Commission is also keen to capitalise on the opportunities highlighted in the *Economic Statement* in the renewable energy sector, the advanced manufacturing sector and the traded services sector, by ensuring that South Australia has the skills base to support growth and diversification of the State economy.

Further, responding to the economy's presently projected skills demands is unlikely to deliver the quantum of qualifications required by individuals to achieve the SASP and COAG targets for the population as a whole. This will require a greater investment in training and skills development.

The supply estimates presented above reflect a ***continuation of past trends*** in completions of qualifications in South Australia. However, our initial modelling work suggests that ***significant additional completions*** will be required to meet agreed targets.

In 2008, COAG agreed to the following target for the tertiary sector:

> *Reduce the proportion of Australians aged 20 to 64 without qualifications at Certificate III level and above by 50 per cent between 2009 and 2020*.

This target is closely related to target T6.19 in *South Australia's Strategic Plan*:

> *T6.19 Non-school qualifications: by 2014 equal or better the national average for the proportion of the labour force with non-school qualifications*.[13]

Our modelling work with respect to the COAG target suggests that, to meet this target, South Australia would need to deliver an additional 10,400 completions per annum above the current rate – roughly split equally between VET and higher education.

If there is no improvement on current completion rates (just over 70% for higher education and less than 50% for VET[14]) the requirement to produce the additional 10,400 tertiary ***completions*** per annum would require significantly more ***commencements*** – in the case of higher education at least 7,200 additional annual commencements and for VET at least 10,400 additional annual commencements, compared with current levels.

Clearly, any improvement in completion rates would make these targets easier to reach.

Increasing educational participation by this magnitude at the post school level will not only require increased investment in provider capacity and training delivery, it will also depend on other improvements in the system, including raising Year 12 (or equivalent) retention rates, improving access to tertiary study for under-represented groups, increasing enrolments in science, technology and maths; and improving pathways between schooling and tertiary education.

Although these targets for participation in tertiary education appear to exceed the present projections of labour demand from economic growth, in the medium term the economy should be able to grow faster in line with its enhanced potential capacity that would result from the additional supply of skilled labour implied by the Governments' targets.

13 It is extremely difficult to quantify the size of the challenge that the SASP target represents, as the target for SA is ***relative*** to the national average, rather than an absolute measurable level (currently South Australia 56.6%, Australia 59.3%).

14 Fifty per cent is the most recent attrition rate for ***apprentices and trainees***. It is likely that the attrition rate for 'other VET' is significantly more than this. However, non-completers in this group may include a significant (but unquantifiable) number of people who have successfully completed a skills set.

Chapter 4

SKILL NEEDS: INDUSTRY PRIORITIES

This chapter summarises the key themes and issues identified through the Commission's consultations with industry and other key stakeholders since late 2008. It also includes a brief summary of the outlook for 16 broad occupational groupings (more detailed information is included as Appendix 2 **www.tasc.sa.gov.au**).

Appendix 3 (**www.tasc.sa.gov.au**) includes *Profiles* for 17 regions in South Australia, based on published data and information, local intelligence provided by the State's Employment and Skills Formation Networks (ESFNs), and initial consultations undertaken by the Commission in late 2008 to inform the implementation of the PPP in South Australia.

The Commission has also looked closely at the detailed workforce studies (Industry Workforce Action Plans – IWAPs) which have been undertaken for six priority sectors in the South Australian economy: Agri-food, Minerals, Defence, Advanced Manufacturing, Health and Community Services, and Construction.

Key Points

The *Profiles* in Appendix 2 (which in turn are based on the industry consultations and the detailed industry studies) reveal a number of common themes and priorities across sectors.

- *Career promotion:* sectors identified issues such as the poor image of their sector, competition from other sectors (related to major projects), difficulties in promoting the occupations/industry – particularly to young people, the need for clearly articulated career paths and the importance of career advice. A number of sectors identified the need to attract potential workers from under-represented groups.

- *Government and industry collaboration:* industry cited a need for better co-ordination between government and industry (as well as between industry sectors and between government agencies) in the identification of workforce issues and the development of strategies and initiatives. A key theme is the need for better linkages between education and training sectors and an improved interface between industry and providers (school, VET and higher education). A number of sectors identified the lack of job placement opportunities for students as a significant issue.

- *Industry engagement in workforce planning and development:* it is clear that within many sectors individual firms (particularly SMEs) lack the skills and capacity to undertake workforce planning and to develop strategies to address workforce issues. There is a lack of awareness within industry of the programs and services available to assist firms, such as the industry skills board network and the *Building Business Capability* program. A number of sectors identified the need for a "one stop shop" brokering service to support enterprises with workforce planning and to help them navigate the education and training system.

Key Points continued

- *Recruitment and retention:* all sectors cited difficulties in attracting and retaining skilled workers, despite the temporary "reprieve" provided by the economic downturn. Entrenched skill shortages remain within a number of sectors and the ageing of the workforce has been identified as a looming problem. Attraction and retention in the regions is an important issue in a number of sectors. In some sectors turnover is high as workers seek jobs in other sectors with better pay and conditions. Skilled migration is seen as an appropriate strategy in critical skill shortage areas, alongside increasing employment participation of groups not currently participating.

- *Skills development:* all sectors highlighted the need to retain skills during the current downturn (in particular the need to focus on apprentice retention) and to use the opportunity to invest in training. A number of sectors have already put in place initiatives to do this, however some sectors are seeing a decline in investment in training. All sectors identified the need to increase investment in the up-skilling and re-skilling of the existing workforce. Greater use of skills recognition processes is seen as a priority across all sectors. Industry identified a general shift to higher level skills but also emphasised the importance of core generic transferable skills. Literacy and numeracy skills and science and maths were identified as high priorities. Other common skills needs include: project management, change management, asset management, HR skills, green/emerging skills, innovation skills, including management and leadership, occupational health and safety, and skills in training and assessment. A number of sectors identified the need for training for volunteer, casual and seasonal workers, and training for people living in the regions. A number of sectors also identified the need for training in 'skills sets' in addition to full qualifications.

- *Quality:* many sectors raised concerns about the quality of training outputs. These concerns relate both to general comments about the capacity of individuals who had completed training to undertake particular tasks, to industry specific comments, and comments about individual providers. There are also concerns about the complexity of the current system. Flexibility in terms of delivery times and accessibility to programs is also an issue. There are concerns about whether teachers and lecturers have up to date industry knowledge and about the capacity of the system to respond adequately to industry needs.

A range of potential workforce development ***strategies*** have also been identified by industry (primarily through the IWAP process). Further consultation and collaboration between industry and government will be required to consider these proposed strategies and to implement responses.

Broad strategies include:

- developing literacy and numeracy skills in the current and potential workforce
- promoting the take-up of maths and science in secondary schools
- developing initiatives to increase workforce participation among under-represented groups to ensure that there is sufficient skilled labour to support future expansion and to replace workers who retire
- establishing opportunities for industry/education exchanges and other strategies to develop the education and training workforce, particularly within TAFE SA
- building better pathways between school, VET and higher education (through conversion and bridging courses; targeted scholarships, internships and cadetships; and seamless pathways)
- embedding job placement opportunities into learning programs
- continuing to develop successful workforce participation programs and models – and apply them more broadly
- continuing to utilise skilled migration in critical occupations in shortage

- improving the marketing and promotion of the sectors as long term careers of choice
- addressing the low retention rates of apprentices
- developing initiatives to up-skill the existing workforce and provide pathways for advancement
- providing better information for clients (industry and students)
- developing and raising awareness of programs and initiatives to assist firms in planning for and implementing workforce development solutions (such as the *Building Business Capability* program)
- strengthening workforce planning across all sectors and HR capabilities within organisations
- addressing structural factors that impact on the capacity of industries, particularly those in the non-government sector, to meet workforce development challenges
- undertaking workplace reform, including redesigning work roles both to respond to the changing needs of industry and to respond to the needs of different generations of workers.

Summary Profiles

The *Profiles* in Appendix 2 are organised around 16 broad ***occupational groupings*** – occupations requiring similar skills have been grouped together. Each grouping has been given a heading which reflects the main industries in which the occupations are employed. A full list of the occupations covered by each sector is included in the Attachment to Appendix 2.

Automotive

The Automotive sector consists of those occupations involved in the manufacture, assembly, sales and service of motor vehicles and components. The key occupations within the sector directly employ 15,200 South Australians (just under 2% of total employment). The Automotive industry accounts for 4.6% of Gross State Product (GSP).

The sector is currently being affected by the global financial crisis and ongoing restructuring of the automotive manufacturing sector. Over the coming years a key driver for change will be the Commonwealth Government's $6 billion plan to transform the automotive and automotive components industry and to produce an environmentally friendlier green vehicle. The vehicle production sector will also be assisted by the State Government's recent decision to increase the purchase of locally produced Holden vehicles for the State Government fleet.

The sector is currently experiencing skills shortages in key service and repair occupations.

The sector is expected to have a relatively small number of job openings over the next five years (less than 5,000), with most resulting from replacement demand.

The top-down modelling suggests that the sector will account for 2% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. On present policies and trends it is estimated that the sector will receive 2.2% of the total supply of publicly funded qualifications over this period – roughly in line with expected demand.

Industry consultations have identified a number of key issues and challenges, including ongoing technological advances, difficulties in attracting skilled staff, and the need to up-skill existing workers and embed transferable generic skills across the sector.

Summary Profiles continued

Building and Construction

The Building and Construction sector comprises occupations involved in the construction, maintenance and renovation of residential, commercial and industrial structures. The key occupations within the sector directly employ 46,100 South Australians (just under 6% of the workforce). The industry accounts for 9.1% of GSP.

The sector has received a boost from the first home owners grant and will be positively influenced over the next five years by the $45 billion worth of major projects either underway or in the pipeline in the State (of which a significant proportion will have a construction component). The recent $42 billion Commonwealth *Nation Building and Jobs Plan* and recent infrastructure announcements will further stimulate growth and the demand for skills within the sector.

The sector is currently experiencing skills shortages across a number of key professional and trade occupations.

It is expected to have a relatively small number of job openings over the next five years (just over 5,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 5.8% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. On present trends and policies it is estimated that the sector will receive 3.5% of the total supply of publicly funded qualifications over this period. These projections suggest that the supply of education and training places for specialised building and construction skills may need to be augmented, and this will be further pursued in the November Five Year Plan.

Industry consultations have identified a number of key issues and challenges, including the poor image of the industry as a career choice, the need to improve workforce participation, high turnover, the potential to leverage employment and training opportunities from capital works contracts, and the requirement to better align career paths with industry licensing outcomes and training packages.

Business and Financial Services

The Business and Financial Services sector includes occupations involved in the provision of administration and management services to businesses, financial and insurance services, property maintenance and management services and professional services. The key occupations within the sector directly employ 203,900 South Australians (more than one quarter of the workforce). The industry accounts for 19% of GSP.

According to industry, the impact of the global financial crisis will be felt to varying degrees within the business and financial services sector. Within finance, there are likely to be extensive job losses in the short term, but expansion as the upturn kicks in. Further rationalisation within banking and finance will also impact on the demand for skills and labour. Job losses are expected in IT and in clerical/administrative occupations including in call centres.

The sector is currently experiencing skills shortages of accountants and auditors.

It is expected to have a relatively large number of job openings over the next five years (more than 30,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 26.3% of the total demand for qualifications over the next five years, with the majority of demand for qualifications spread across the Certificate III to Diploma/Advanced Diploma level. It is estimated that the sector will receive 24.8% of the total supply of publicly funded qualifications over this period. Many of the skills used in this occupational sector are broadly based, and it appears on present evidence that for this sector the supply and demand for education and training are approximately in balance.

Industry consultations have identified a number of key issues and challenges, including the need to up-skill/re-skill workers who lose their jobs, or are at risk of losing their jobs, to enable them to move to other sectors, and the need to help older workers who want to retire (but may not be in a financial position to do so) to transition out of the sector. Recognition of skills and prior learning will be critical and there is a need for more workplace trainers and assessors.

Cultural and Recreation Services

Cultural and Recreation Services includes occupations that are involved in providing cultural and recreational services and facilities, such as film and video services, radio and television services, libraries and museums, parks and gardens, arts and services to the arts, sport and gambling services. The key occupations within the sector directly employ 15,600 South Australians (2% of the workforce). Some sectors are heavily reliant on volunteers, and many workers have their primary job in another sector and hence are not captured in the official employment statistics. The industry accounts for 1.8% of GSP.

The impact of the global financial crisis will vary across the industry – some sectors are already being affected, some others are more resilient, while for others it is too soon to tell. Some parts of the industry are heavily reliant on government funding/grants or philanthropy (commonly not-for-profit organisations) and there is uncertainty about future funding arrangements given budget pressures. There is some substitution between "luxury" items to cheaper items hence some parts of the industry are more insulated than others from the impact of the global financial crisis.

The sector is expected to have a relatively small number of job openings over the next five years (less than 2,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 2.3% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Degree or higher level. It is estimated that the sector will receive 3.3% of the total supply of publicly funded qualifications over this period. Although on present evidence the supply of education and training places for this sector may exceed the demand, it may be that in many cases the skills obtained will be re-deployable elsewhere if necessary.

The industry has identified a number of key issues and challenges. Of note are that many of the sectors are not connected to the notion of "skills and workforce development" and that workforce planning is difficult because much of the employment within the sector is not captured in official statistics. Job redesign and packaging of tasks can help build viable jobs and reduce the loss of skills and workers. There is a critical need to provide retraining for older workers.

Summary Profiles continued

Education and Training

The Education and Training sector includes occupations that are involved in the provision of teaching and education support services across the primary, secondary and tertiary sectors. The key occupations directly employ 37,300 South Australians (just under 5% of the workforce). The industry accounts for 5.2% of GSP.

The export of education (international students) accounts for approximately 3,800 jobs and is now the State's largest service sector export and fourth largest export. Adelaide continues to attract record numbers of international students, with more than 26,000 choosing the city as their study destination in 2008 (an increase of 17.5% on 2007).

The sector is expected to have a significant number of job openings over the next five years (between 5,000 and 10,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 5.8% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Degree or higher level. It is estimated that this demand will be roughly matched by the 5.9% share of the total supply of publicly funded qualifications that the sector will receive over this period.

Within the sector, significant change is occurring to service delivery models, particularly in the early years, with the integration of early learning centres. COAG is also turning its attention to workforce planning and development for the early childhood, schooling and VET sectors. The Review into Higher Education also identified workforce planning and development as underpinning issues to effect the changes required in the tertiary sector.

Electrotechnology

The Electrotechnology sector includes occupations involved in the generation, transmission and distribution of electricity, the provision of postal, courier and telecommunication services and printing, publishing and recording of media. The key occupations within the sector directly employ 42,600 South Australians (just under 6% of the workforce). The industry accounts for 5.1% of GSP.

The industry will be positively affected over the coming years by various major projects currently underway or in the pipeline in South Australia, in particular the $8 billion Air Warfare Destroyer project and the recent announcement of additional defence spending on the next generation of submarines. The substantial water management and Cleantech developments, and the electrification of the train network, will also impact on the demand for labour and skills.

The sector is currently experiencing skills shortages across a number of key professional, associate professional and trade occupations.

It is expected to have a relatively small number of job openings over the next five years (just over 5,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 6.7% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Certificate III level. It is estimated that the sector will receive 4.7% of the total supply of publicly funded qualifications over this period. On present evidence it therefore seems likely that this sector will need to receive an increase in its share of total education and training places, especially as many of these skills are relatively specialised.

Industry consultations have identified a number of key issues and challenges, including the need to up-skill and retain existing workers, the lack of flexibility in course offerings, technological changes (requiring knowledge of greenhouse issues, solar installation and wind turbines), and current funding restrictions relating to skills sets.

Health and Community Services

The Health and Community Services sector includes occupations involved in the provision of health and social/community services. The key occupations within the sector directly employ 83,500 South Australians (just over 10% of the workforce). In addition to the paid workforce, the sector has a large supplementary workforce, made up of volunteers and informal carers. The industry accounts for 8.7% of GSP.

The current global financial crisis is likely to increase demand for services provided by the industry. Budgetary pressures within government agencies may result in less investment in skills development during the downturn, and there is already an impact on agencies that rely on donations and investments to fund significant proportions of their service provision. As a result, there is a risk that the current skills shortages will be exacerbated by the economic downturn.

The sector is currently experiencing skills shortages across a number of key professional and associate professional occupations.

It is expected to have a relatively large number of job openings over the next five years (just under 20,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 14.8% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Degree or higher level and the Diploma/Advanced Diploma level. It is estimated that the sector will receive 18.6% of the total supply of publicly funded qualifications over this period. Although these estimates suggest that the supply of publicly funded places may exceed industry demand, it needs to be remembered that there is a present shortage of these skills that needs to be overcome.

Industry consultations have identified a number of key issues and challenges, including the importance of attracting a more diverse workforce, strengthening workforce planning and building HR capabilities within organisations. There is a critical need to develop career pathways that are aligned with training and to develop generic, transferable skills to facilitate movement between sectors. There is also a critical need for skills recognition for workers with no post school qualifications and an ongoing need to strengthen the skills of existing workers.

Summary Profiles continued

Manufacturing (Food and Beverage Processing, Light Manufacturing, Process Manufacturing)

The *Food and Beverage Processing* sector includes occupations involved in the processing of primary products (animal, grains, fruits and vegetables) into secondary products for human consumption. The key occupations within the sector directly employ 11,300 South Australians (just over 1 per cent of the workforce). The industry accounts for 2.8% of GSP.

The *Light Manufacturing* sector includes occupations involved in the manufacturing of textile, clothing, footwear and leather products. It also includes laundry and dry cleaning services and furniture manufacturing. The key occupations within the sector directly employ 7,200 South Australians (less than 1 per cent of the workforce). The industry accounts for 1.4% of GSP.

The *Process Manufacturing* sector includes occupations involved in the manufacturing of petroleum, coal, chemical and associated products as well as the manufacturing of non-metallic mineral products. The key occupations within the sector directly employ 23,400 South Australians (3% of the workforce). The industry accounts for 2% of GSP.

The manufacturing sector is being impacted significantly by the global financial crisis, but in the medium to longer term there will be flow-on effects resulting from the expansion in mining and defence. Many firms have begun to reduce worker hours/shifts in an attempt to retain skilled workers rather than lay off staff. The high volume/low cost sectors will continue to struggle but there are significant opportunities at the higher skill levels, where innovation and research and development are critical. The low value of the dollar has helped local exporters and import-competing firms.

Combined, these sectors are expected to have relatively few job openings over the next five years (less than 1,000).

The top-down modelling suggests that the *food and beverage processing* sector will account for 0.7% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. It is estimated that the sector will receive 2.1% of the total supply of publicly funded qualifications over this period.

The top-down modelling suggests that the *light manufacturing* sector will account for 0.6% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. It is estimated that the sector will receive 1.1% of the total supply of publicly funded qualifications over this period.

The top-down modelling suggests that the *process manufacturing* sector will account for 1.4% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Certificate III level. It is estimated that the sector will receive 2.2% of the total supply of publicly funded qualifications over this period.

In sum, the presently projected capacity to supply these manufacturing skills may exceed the demand. Further consideration is needed of the scope for re-deployment of this training capacity, but also it will be particularly important that these employees obtain generic skills that allow them to work elsewhere.

Industry consultations have identified a number of key issues and challenges, including: the need for continued support to up-skill the existing workforce; the need to ensure and enforce quality standards for training providers; the need for longer term funding to allow industry to plan and develop major workforce development initiatives; the potential flow on impacts from major project developments; ongoing technological changes and the need to develop core skills to promote mobility between sectors.

Mining and Engineering

The Mining and Engineering sector includes occupations involved in the extraction of naturally occurring mineral solids, liquid minerals and gases, the provision of exploration services, and metal product and equipment manufacturing, including within the defence sector. The key occupations within the sector directly employ 32,600 South Australians (just over 4% of the workforce). The industry accounts for 8.5% of GSP.

The sectors will be positively affected over the coming years by the $45 billion worth of major projects currently underway or in the pipeline in South Australia, in particular the BHP-Billiton Olympic Dam Expansion and the Air Warfare Destroyer project. It will also be boosted by the recent announcement of additional defence spending in South Australia. In the more immediate term, the sector is being impacted significantly by the global financial crisis. There is an acknowledgement that it will be critical to hang on to skilled staff – to avoid future shortages and to ensure that the industry can rebound as quickly as possible.

The sector is currently experiencing skills shortages across a number of key professional and trade occupations.

It is expected to have a relatively small number of job openings over the next five years (around 5,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 4.7% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. It is estimated that the sector will receive 2.4% of the total supply of publicly funded qualifications over this period.

Perhaps not surprisingly, given the changing structure of the South Australian economy, it seems likely that demand for skills in this sector may well exceed the likely supply if further action is not taken to redeploy resources from elsewhere in the education and training system.

Industry consultations have identified a number of key issues and challenges, including: competition for workers between sectors as a result of major projects; ongoing technological changes; and the need for additional support and mentoring, particularly for indigenous workers and students. There is also a need for better pathways and articulation arrangements between higher education, VET and schools.

Summary Profiles continued

Primary Industry

The Primary sector includes occupations engaged in the breeding, growing, cultivating, harvesting and keeping of plants and animals. This includes agriculture, commercial fishing and aquaculture, forestry and logging, wood and paper products and services to agriculture such as animal care and conservation. The key occupations within the sector directly employ 48,100 South Australians (just over 6% of the workforce). Employment size varies depending on the season. The industry accounts for 6.2% of GSP.

The sector is being impacted significantly by the effects of drought and the global financial crisis. The regional location of the workforce provides particular problems for attracting, developing and retaining the appropriate workforce with the specific skills needed to meet industry sector requirements.

The sector is currently experiencing skills shortages of environmental and agricultural science professionals.

It is expected to have a relatively small number of job openings over the next five years (less than 5,000), with the vast majority of openings resulting from replacement demand.

The top-down modelling suggests that the sector will account for 3.4% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III/IV level. It is estimated that the sector will receive 4.2% of the total supply of publicly funded qualifications over this period. To the extent that supply of these qualifications exceeds the future demand, it may be that some of the people concerned will be re-deployed, particularly to the mining industry, but again it will be important that their training is sufficiently generic to allow them to work elsewhere.

Industry consultations have identified a number of key issues and challenges, including: the need for better integration of industry development and workforce development and the need for workforce planning to be linked to regional development plans. There is a need to clearly define pathways between VET and higher education and to improve flexibility in obtaining and recognising skill sets. Increasing environmental awareness and expectations of sustainable food chains requires up-skilling of existing workers.

Public Administration and Safety

The Public Administration and Safety sector includes administrative, policy, planning and management occupations across the three tiers of Government (Local, State and Commonwealth) and those organisations involved in public order and safety. The key occupations within the sector directly employ 21,200 South Australians (just under 3% of the workforce). The sector also relies on volunteer labour. The industry accounts for 4.9% of GSP.

The sector is expected to have a significant number of job openings over the next five years (just under 10,000), with openings primarily resulting from growth.

The top-down modelling suggests that the sector will account for 5.9% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Degree or higher level. It is estimated that this demand will be roughly matched by the 5.6% share of the total supply of publicly funded qualifications that this sector will receive over this period.

The following issues have been highlighted by the sectors: the impact of the ageing workforce and government budget constraints on employment; the increased need for leadership and management capability; difficulties in recruitment and retention of skilled professionals, particularly in regional areas and due to competition from other sectors. Changing service standards and expectations are creating demand for continuous up-skilling. The industry is also adjusting skills to respond to legislative and regulatory changes, particularly in local government, safety and emergency services.

Tourism and Hospitality

The Tourism and Hospitality sector includes occupations involved in the provision of hospitality services in the form of food, drink, accommodation and entertainment. The key occupations within the sector directly employ 40,800 South Australians (just over 5 per cent of the workforce). The industry accounts for 2.3% of GSP.

The impact of the global financial crisis will vary across the industry. There is some substitution between luxury items to cheaper items and a tendency to "holiday nearer to home" hence some parts of the industry are more insulated than others from the impact of the global financial crisis.

The sector is currently experiencing skills shortages of chefs and cooks.

It is expected to have a significant number of job openings over the next five years (just under 15,000), with openings resulting from both growth and replacement demand.

The top-down modelling suggests that the sector will account for 5.3% of the total demand for qualifications over the next five years, with the largest demand for qualifications at the Certificate III level. It is estimated that the sector will receive 4.1% of the total supply of publicly funded qualifications over this period. Some of the skills that this sector needs are broadly based and can readily be found from other sectors, but the November Five Year Plan will further consider whether there will be a need to augment training capacity for the more specialised skills.

Industry consultations have identified a number of key issues and challenges, including changing consumer tastes and expectations; the need to continue to provide up-skilling for the existing workforce; the need to ensure and enforce quality standards for providers; the need for standardised short course/skill set training; and the lack of infrastructure, accommodation and transport in regional areas.

Summary Profiles continued

Transport and Storage

The Transport and Storage sector includes occupations involved in the provision of air, marine, rail and road passenger and freight transport, as well as services that support the facilitation and supervision of transport and storage operations. The key occupations within the sector directly employ 51,400 South Australians (just under 7% of the workforce). The industry accounts for 5.4%of GSP.

In areas of discretionary spending (such as rail tourism) there has been a fall in demand but generally the sector is consolidating rather than making people redundant. Government commitments to infrastructure spending (such as the electrification of railways, tram and train extension) means that additional jobs will be created. According to industry, it will be important to retain skilled staff and invest in apprentices during the downturn.

The sector is expected to have a significant number of job openings over the next five years (just under 10,000), with most openings resulting from growth.

The top-down modelling suggests that the sector will account for 3.9% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III level. It is estimated that the sector will receive 2.6% of the total supply of publicly funded qualifications over this period. Given the imbalance suggested by these projections, the Commission will consider whether there will be a need to augment the training capacity for some of these skills in the transport and storage sector.

Industry consultations have identified a number of key issues and challenges, including the recent increase in availability of skilled labour due to the economic downturn (e.g. truck drivers moving back to transport from mining). The workforce has not undertaken much training in recent years and the training that has occurred has largely been in response to legislative changes. New technology requires an increased focus on training and up-skilling of workers. The industry is committed to increasing the number of women employed in transport.

Wholesale, Retail and Personal Services

The Wholesale, Retail and Personal Services sector includes occupations that are involved in the provision of personal services, wholesale services and sales services, including: food retailing, personal and household goods retailing and wholesaling, machinery and equipment wholesaling, hair and beauty services, floristry services, photographic services and funeral services. The key occupations within the sector directly employ 99,500 South Australians (just under 13% of the workforce). The industry accounts for 13.2% of GSP.

According to industry, the impact of the global financial crisis will vary across the industry – some sectors are already being affected; some others are more resilient; while for others it is too soon to tell. Retention of skilled staff is seen as critical. There is some substitution between luxury items and cheaper items, hence some parts of the industry are more insulated than others from the impact of the global financial crisis. The Commonwealth Government's stimulus package is also helping to reduce the impact of the global financial crisis on the industry.

The sector is expected to have a large number of job openings over the next five years (around 25,000), with openings resulting primarily from replacement demand.

The top-down modelling suggests that the sector will account for 10.4% of the total demand for qualifications over the next five years, with the majority of demand for qualifications at the Certificate III/IV level. It is estimated that the sector will receive 12.8% of the total supply of publicly funded qualifications over this period. The projected excess supply of publicly funded qualifications in this sector relative to demand, suggests that there may be a need to switch resources from some of the skills, possibly concentrating on Certificate II skills for which demand is generally declining and which the evidence suggests lead to less good job outcomes.

Industry consultations have identified a number of key issues and challenges, including the need for providers to tailor education and training products to meet employer needs; the lack of training for people in regional/rural areas; and competition from higher wage industries. Retail businesses are increasing productivity through technology, and improved distribution and product sourcing.

Chapter 5

AGENDA FOR REFORM

Given the growth prospects set out in the EDB's *Economic Statement*, the skills requirements outlined in **Chapter 3** and the industry feedback highlighted in **Chapter 4**, it is clear that South Australia must increase the nature and pace of reform in skills and workforce development.

While the State's labour force participation recently reached an all time high, the impact of the global financial crisis has brought an increase in unemployment. The economic downturn should be used as an opportunity for South Australia to increase, rather than maintain or reduce, its training effort.

There are practical and immediate responses for government and industry to make. These fall into four broad categories – retention, re-engagement, up-skilling, and assisting long-term unemployed and disadvantaged job seekers.

The Immediate Challenge

The Commission supports measures the State Government has put in place to complement and leverage initiatives in the Commonwealth Government's $42 billion *Nation Building and Jobs Plan* to retain apprentices and existing workers, and to assist displaced workers.[15]

It is clear that the State's primary employment initiative, *South Australia Works*, also must link into and support other State and Commonwealth initiatives, such as the PPP and assistance to out of work apprentices and trainees. A review of *South Australia Works* is due for completion in November 2009. The Commission believes this review must address how the program should adapt to the new economic climate and the proposed reforms to the education and training system.

The Commission also supports the establishment of the Youth Compact, which will provide an education and training guarantee to young people under the age of 25. However, implementing the Compact poses potential risks to meeting SASP and COAG targets for increasing and deepening skills.

It will be important that in meeting the substantial funding requirements for the Youth Compact there is no substitution of funds which causes other categories of workers and job seekers to be excluded from learning and work programs. In particular the approach to funding the Compact should not put at risk programs for retrenched, vulnerable and mature aged workers.

Whatever programs are put in place for young people must enhance individuals' skills development and the State's economic directions and not result in "time serving." An amended funding model must support young people to be in learning or work and provide the support services they may need to be successful.

15 E.g. rapid referral to the Out of Trade Register to better match employers and group training organisations with apprentices. Group Training Australia (SA) has agreed to host an expanded on-line Out of Trade Register which will provide employers (including group training organisations) with a pool of retrenched out of trade apprentices seeking opportunities to recommence their apprenticeship.

Policy Issues

The Commission has identified six key policy issues that will shape the program of work to be undertaken between May and November 2009 and the development of the detailed Five Year Plan.

1 A Demand Driven System

The Commission will develop a clear position on the elements of a tertiary education and training system which balances the needs and preferences of students with the future demands of the economy and industry.

We have known for more than a decade that the training system must be driven by demand from individuals and industry, yet the Commission's industry consultations suggest there is still a perception that it is provider led. The challenge is to find the right balance between the needs of individuals and enterprises.

It is often assumed that the principles of satisfying the needs of individuals (the student demand driven approach) are at odds with meeting the skills needs of industry and employers. Consequently the demand for labour by employers is set against the demand for courses by students or prospective students. Nationally there is debate about whether, at the tertiary level, it is best to have provision shaped by the demands of industry or the demands of individual students.

In its consultations with industry, the Commission has identified a range of barriers to accessing the education and training system. These include:

- lack of flexibility in delivering training programs
- costs associated with training – both direct and indirect
- inappropriate or outmoded training programs and products.

The push to move to a system driven by student demand (where students have choice of qualifications and provider) has been a central plank in a number of recent reports/inquiries with respect to both the VET and higher education sectors – see for example the Review of Higher Education, the OECD Review of Australian VET, the COAG proposals for VET market reform, and a recent report on the UK VET system by DEMOS.[16] Victoria has already moved towards a student demand driven system for the tertiary sector although this is balanced with strategies and programs to assist individual businesses to meet their labour requirements.

Ideally, student demand, informed by intelligence about industry demand, should drive institutional education and training. Of course, where the learner already has an employment relationship with industry, such as an apprenticeship or cadetship, the alignment of student demand with industry demand is more secure.

16 DEMOS 2008, *The skills paradox: confronting inequality in adult learning*

In a recent paper for national consultation, Skills Australia proposes a managed market approach to VET funding in which States and Territories would purchase skill outcomes based on economic and workforce development needs. This has significant implications for the architecture of the system. It would require strengthening the role of industry – including enhanced roles for ISCs and ISBs – and an agreed approach about how to integrate and use qualitative industry advice in a comprehensive framework. Linked to this is the need for improved consumer information about provider performance and outcomes to assist choice.

In the context of the State's economic direction, as outlined in the EDB's *Economic Statement*, South Australia requires a clear position on the elements of a tertiary education and training system which will satisfy individual students in their choice of study and meet the skills requirements of individual businesses.

In order to significantly increase participation in tertiary education – to meet the levels required to meet agreed targets – we will also need measures in place to encourage participation and to improve access and pathways. The national entitlement for young people to have a funded place in education or training up to the age of 24 will help provide the foundation for this. However, it must be complemented by other measures to support further participation in learning.

2 A Tertiary System

The Commission will examine ways in which the tertiary education and training system in South Australia can be better integrated to meet the skilling needs of individuals and industry.

The Commonwealth Government has committed to a target of 40% of 25-34 year olds with a bachelor-level qualification by 2025. At the same time, industry has asked for better coordination between government and industry and between industry sectors in the identification of labour market needs and the development of strategies and initiatives. To meet both these needs, the Commission believes a more integrated tertiary education sector is required.

The Commission acknowledges that VET and higher education providers differ in their approach to learning, accreditation, governance, funding and student characteristics.[17] In addition, VET has greater social and regional coverage. However, South Australia should be able to provide integrated responses to workforce needs for industries and enterprises including those in specific localities and communities like outer metropolitan and regional areas.

[17] Tom Karmel 2009, *Reflections on the tertiary education sector in Australia*

Policy Issues continued

3 Pathways

The Commission will undertake work to understand what mechanisms are currently in place to promote pathways between elements of the education and training system, how well they are working and what improvements can be made.

Skills development starts from early childhood, continuing on through schooling, post-compulsory education, training and lifelong learning. Individuals traverse a number of learning and career pathways in their lives, with transitions between education and training but also within an industry or across industries.

In order to navigate their way through the system, enter the workforce and improve their skills once they are there individuals need accurate and comprehensive information, assistance in making the right choices and flexible structures which respond to need.

During our discussions with industry we were told by representatives of some industries that career paths need to be more clearly articulated, in particular to young people and potential workers from under-represented groups. People who have difficulty in accessing formal education, training and employment may benefit more from community based learning programs (e.g. Adult Community Education) which can provide effective pathways towards formal skills development and employment. In addition, the tertiary system needs to be more responsive to transitional training needs by building on prior knowledge and addressing gaps.

The Commonwealth has recently announced increased funding for cross sectoral programs to encourage entry to higher education. Institutions will be supported to work collaboratively with VET and schools to improve access to higher education from under-represented groups.

4 Skills for the New Economy

The Commission, working with the Economic Development Board, will examine the key skills required in new and transformed industry sectors; and will develop an approach for ensuring the State's skill base supports future growth and diversification of the economy.

The South Australian economy appears to underperform in knowledge-based services and this no doubt in part explains the State's current skills profile. If the State is to build knowledge-based industries and increase its share of services exports, a different skills profile is a priority. Transformational change in industry, innovation and education policy will be necessary. The Commission acknowledges that one of the key challenges is to lift the State's productivity by encouraging workers and firms to innovate and move to new growth areas, including new niche markets.

The world of work now requires, on average, higher levels of skill than it did a decade ago. Employers are increasingly looking for a set of core skills (learning, reading, writing, oral communication, numeracy and technology). Many low level skill jobs have ceased to exist, while some industries have an increase in demand for high-level skills.

The EDB has flagged the opportunities that exist in export industries characterised by high value-add and innovation – such as agribusiness, electronics, renewable energy and medical equipment. Furthermore, new opportunities in mining and defence all involve substantial infrastructure development and construction.

The EDB has recommended that the South Australian Government implements strategies to promote innovation in renewable energies, water security and carbon reduction. Stimulating growth of knowledge based industries and developing the new emerging technologies for "green" industries require much more than incremental change in education and training approaches and systems.

One future focus of the Commonwealth Government's industry and innovation policies will be on building innovation capacity and performance at the enterprise level. Policies must recognise the complexity of the innovation process and the different forms innovation can take.[18] This will require clarity about the right balance between skills led or industry led approaches and a high degree of cooperation between government, industry and the education and training system.

5 Use of Skills and Workforce Development

The Commission will explore the opportunities that exist for government and industry to work together to better recognise and use the skills of the existing workforce.

It is not just the quantum of skills that is important, there is a need to ensure that the workforce has the skills needed by industry. It is crucial that our education, training and employment system is responsive to the needs of industry and that workforce development strategies attract, retain and fully utilise workers' skills to boost productivity. Providers will need to develop partnerships with industry and individual firms to foster the take up of new approaches to workplace practices and to ensure flexible client focussed delivery. These partnerships should consider how work is organised and can lead to job redesign that improves career pathways and the retention of skilled workers.

The recent AiG report *Skilling the Existing Workforce: unlocking productivity in your business*[18] indicates that a high proportion of companies consider that retraining existing workers is the most effective form of meeting their current skills needs. Other key findings include:

- workplaces are sites of learning
- skilling the existing workforce is a priority across industry
- enterprises need independent, quality advice to underpin skilling decisions
- low levels of workforce literacy limit workforce effectiveness and hamper future skilling efforts
- Registered Training Organisations need to build their capacity and capabilities
- informal workplace skilling efforts need to be better supported
- industry competency standards are important building blocks.

18 Australian Government 2009, *Powering Ideas*, pp. 44-5.
19 Australian Industry Group (AiG) 2009, *Skilling the Existing Workforce*

Policy Issues continued

6 A Quality System

The Commission will develop a position on the preferred model for the regulation of the tertiary system in South Australia and will advise on how South Australia can position itself to engage most effectively with the major changes occurring at the national level.

Education is one of South Australia's largest export services. The VET sector continues to grow, with more than 300 registered providers, and the University City Project is facilitating the establishment of international universities and higher education institutions in South Australia. Only providers registered under the *Training and Skills Development Act 2008*, or an interstate equivalent, are authorised to offer training and education services that lead to a qualification recognised under the Australian Qualifications Framework.

For accreditation authorities there is an increase in the number and complexity of applications for registration, including providers delivering higher education. There is also a significant and continuing increase in provision of education and training to overseas students. This creates an added incentive for the regulatory system to be effective so that a high level of quality assurance is maintained.

Many sectors have raised concerns about the quality of training outputs. These range from general comments about the capacity of individuals who had completed training to undertake particular tasks, to industry specific comments and comments about individual providers. The complexity of the current system is also an issue for many.

It is critical that local employers and overseas students have confidence in the quality of the training and education services on offer. The Commission has legislative responsibility for quality and the regulatory functions but they are delegated to the Department of Further Education, Employment, Science and Technology (DFEEST) which is under increasing pressure to deal with the volume and complexity of quality provision. South Australia is one of the few jurisdictions in which functions related to quality regulation are not conducted by a separate regulatory authority.

The Commission expects that the education and training system at all levels should meet standards of quality and performance that are nationally and internationally benchmarked. The Commonwealth recently made a policy commitment to establish a higher education quality assurance framework based on externally validated standards and rigorous measures of performance reported publicly.

Chapter 6

THE NEXT STAGE

The Commission recognises that the problems facing the South Australian workforce in the current economic environment require an immediate response. It wants to ensure that what is being done to minimise the impact of the downturn is consistent with long-term measures which governments and industry are taking.

The Commission supports the view of the EDB that there is an opportunity over the next five years to prepare for a future of sustained economic development and growth if the State increases its investment now in its skills base.

The Commission believes that there are three critical goals for skills and workforce development in South Australia:

- raising the skill levels of South Australians
- increasing the number of South Australians with post school qualifications
- increasing employment participation.

These goals require education and training provision which is underpinned by the following principles:

- *Relevant* – to the needs of both individuals and industry
- *Fair* – with opportunities for all to benefit and achieve their best
- *Timely* – available when needed by individuals and by enterprises
- *Flexible* – available in locations and with delivery methods which meet individual and industry needs.

Such goals and principles have the greatest chance of being fulfilled in a system which demonstrates the following characteristics:

- *High quality* – where outcomes are equal or better to those in similar jurisdictions
- *Shared investment* – between individuals, governments and industry
- *Partnership* – in planning and implementation between government, industry and community.

Underlying these goals, principles and characteristics is the position that the skills of the South Australian population are our greatest asset and education is the critical shared factor for both economic success and maintenance of a resilient and civil society. A more highly skilled workforce will enable industry to respond rapidly to new skills demands resulting from climate change, the expansion of key sectors such as mining and defence, the ageing population and the changing nature of the workplace. Utilising the talents of all more equitably and making it possible for more people to participate in the paid workforce will contribute to a fairer and more inclusive society.

After consideration of the advice it has received from industry and providers and in light of the speed of change in other jurisdictions, the Commission has identified six key policy issues – discussed in Chapter 5 – which affect achievement of these goals and the Governments' targets in the medium to longer term. The Commission will reach agreed positions on each before November 2009.

As well, work is proceeding on development of an agreed process for combining top-down modelling information with bottom-up local intelligence which can be used to inform government resource allocation and industry workforce development strategies.

The November Plan will identify directions for action, policy change and expenditure of public funds. It will relate more closely to the 2010-11 budget process by focussing on priorities for publicly funded skills and workforce development as the basis for the Government's resource allocation plan for VET and employment programs.

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Appendix 1

MODELLING RESULTS

Overview

This Appendix supports the information presented in **Chapter 3**. It:

- includes a quantitative assessment of the workforce challenge over the next five years, related to new opportunities resulting from major projects and the impacts of the aging workforce
- presents the results of modelling of future economic growth, labour productivity and employment growth which is consistent with that undertaken by the EDB for its 2009 *Economic Statement* and its 2008 *Skills Review*.

Key Points

- ***Projected economic growth:*** an average of 2½% per annum from 2007-08 to 2012-13.
- ***Projected employment growth:*** an average of 1¼% per annum from 2007-08 to 2012-13.
- ***Projected labour productivity growth:*** 1¼% per annum from 2007-08 to 2012-13.
- ***A labour force participation rate***[20] of 80.3% will be required to meet projected employment demand in 2012-13 (currently 77.5 per cent[21]).
  This assumes an unemployment rate of 4.2 per cent in 2012-13.[22]
- ***An employment to population ratio***[23] of 76.9% will be required in 2012-13 – an increase of 3.1 percentage points on current levels.

The EDB scenario was modelled by using known data and information, particularly about major projects that are in sight. The scenario takes into account baseline economic growth (based on growth forecasts from a range of economic forecasters) and the employment impacts of major projects which are considered to be "above average". This information is derived from the DTED *Major Developments SA Directory*, the Access Economics *Investment Monitor*, State Government intelligence, and input-output modelling using the RISE (Regional Industry Structure and Employment) model. Refer to the *Economic Statement* (EDB 2009, Appendix 4) for more detail on the methodology used.

20 Refers to the ratio of total persons employed plus unemployed (labour force) in the State to the State's population aged 15 to 64 years. Population estimates are based on Planning SA population projections, high series.

21 Actual, June 2008 (average of 12 months to June 2008)

22 The unemployment rate is projected to fall to 4.0% by 2014/15 (the final year of the EDB scenario projection)

23 Refers to the ratio of total persons employed in the State to the State's population aged 15 to 64 years. Population estimates are based on Planning SA population projections, high series

The Demand Outlook

Over the five year period 2007-08 to 2012-13 it is estimated that growth in the South Australian economy will create 53,000 ***new jobs***. Over the same period, the number of net job openings resulting from ***replacement demand*** is likely to be in the order of 81,000.[24]

The combined impact of economic growth plus the need to replace workers who will be leaving the workforce or changing occupations results in estimated ***total job openings*** over the next five years of around 134,000.

Identifying the Likely Demand for Skills and Training

To capture the likely **total** demand for qualifications, the skilling requirements of ***new entrants*** (to fill job openings resulting from expansion and replacement demand) and the skill requirements of the ***existing workforce*** are estimated separately.

The methodology used to estimate the future demand for qualifications draws heavily on that developed by Monash University's Centre for the Economics of Education and Training (CEET) and that used in the 2008 EDB *Review of Skills and Workforce Development in South Australia*.[25]

Underpinning these estimates is the assumption that skills deepening will continue over the next five years at a similar rate to that observed in the recent past. ***Skills deepening*** in an occupation is measured as the increase in the proportion of people with qualifications over and above that due simply to growth in the number of people employed in that occupation. Under this CEET definition, only qualifications at a ***higher*** level than a worker's current qualification are counted.

New Entrants

To meet the projected industry demand, it is estimated that 96,000 new entrants will need to gain a qualification between 2007-08 and 2012-13:[26]

Table 1: **New Entrants, Projected Demand for Qualifications, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	36,000
Advanced Diploma/Diploma	12,000
Certificate IV	11,000
Certificate III	26,000
Certificate II	7,000
Certificate I	4,000
Total	**96,000**

24 Centre for the Economics of Education and Training, (CEET) Monash University.

25 Refer Shah and Burke 2006 and EDB 2008 for more detail.

26 This may overstate to some extent the demand for qualifications from this group – many of these may be 're-entrants' rather than new entrants (e.g. women returning to the workforce) and therefore may not require a full qualification.

Existing Workers

Projected demand for qualifications from this source totals around 139,000 – resulting from workers who are ***up-skilling*** (completing a qualification at a higher level than their current qualification) – estimated to be 56,000 – and workers who are gaining a qualification at an equivalent or lower level (referred to as 'skills broadening') – estimated at 83,000.[27]

Table 2: **Existing Workers (Up-skilling), Projected Demand for Qualifications, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	8,000
Advanced Diploma/Diploma	9,000
Certificate IV	12,000
Certificate III	22,000
Certificate II	1,000
Certificate I	4,000
Total	**56,000**

Table 3: **Existing Workers (Skills Broadening), Projected Demand for Qualifications, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	23,000
Advanced Diploma/Diploma	15,000
Certificate IV	15,000
Certificate III	27,000
Certificate II	2,000
Certificate I	1,000
Total	**83,000**

Total Demand

The combined demand for qualifications (from new entrants and existing workers) results in projected total demand over the next five years for 235,000 qualifications.

Table 4: **Projected Total Demand for Qualifications, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	67,000
Advanced Diploma/Diploma	36,000
Certificate IV	38,000
Certificate III	75,000
Certificate II	10,000
Certificate I	9,000
Total	**235,000**

27 The ratio used to calculate the number of existing workers studying for a qualification at the same or lower level than previously held has been estimated from historical education and training data. It should be noted that these qualifications ***do not*** contribute to skills deepening, or improve the State's overall 'skills profile' (the proportion of the workforce with post school qualifications).

Total Demand continued

The projected demand for qualifications among existing workers, however, represents a continuation of past trends in projecting the ***demand*** for formal refresher training and updating of skills for existing workers.

For the purposes of this Plan, it has been estimated that another 25,000 VET training places[28] will be required over the next five years (an average of 5,000 a year) to provide formal refresher training and updating of skills for existing workers (though not all of refresher training will require a full qualification).[29] Total projected demand is thus 260,000 qualifications – an average of 52,000 per annum.

Table 5: **Projected Total Demand for Training, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	67,000
Advanced Diploma/Diploma	42,000
Certificate IV	44,000
Certificate III	86,000
Certificate II	11,000
Certificate I	10,000
Total	**260,000**

Projecting the Supply of Qualifications

The ***supply*** of qualifications over the next five years has been estimated by extrapolating recent trends in ***completions*** at the VET and higher education levels.

It is important to keep the following points in mind in relation to these figures.

- Because only ***completions*** are captured, these estimates – by definition – include "wastage" during the period of study.
- The estimates ***exclude*** study which, while accredited, does not lead to a full qualification – for example the numbers do not include individuals achieving a "statement of attainment" (skills set). Currently there are no estimates available of the number of completed skill sets.
- The VET data includes ***publicly funded training only*** – a significant (but, again, unquantifiable) amount of training occurs outside of the publicly funded training system.[30] The main exception is that contracts of training which do not attract public funding (are not eligible for User Choice) are also included.
- The higher education data excludes overseas students.
- The numbers do not capture ***informal*** and ***non-formal*** training (non-accredited training).

Hence these numbers should be considered indicative only, particularly when they are considered against the demand estimates presented above.

28 The distribution across qualification levels is assumed to be the same as for those existing workers who are engaged in 'skills broadening'.

29 In reality, the demand for refresher training is likely to be much more than this, but what is unknown is the quantum of demand for, and supply of, ***informal*** training and/or training which is ***privately financed***. AiG surveys have revealed that the most frequently used method of introducing new skills to existing workers is through ***informal in-house*** training sessions. The same research found that employers regarded ***formal in-house*** training as the most ***effective*** method (AiG 2008).

30 The VET data includes a small amount of domestic fee for service activity in TAFE.

Based on an extrapolation of recent trends, the South Australian education and training system can be expected to produce around 186,000 publicly funded post school qualifications over the next five years.

Table 6: **Projected Qualification Completions, 2007-08 to 2012-13**

Qualification Level	Number
Bachelor degree or higher	62,000
Advanced Diploma/Diploma	12,000
Certificate IV	27,000
Certificate III	50,000
Certificate II	28,000
Certificate I	7,000
Total	**186,000**

In 2008 the Commonwealth Government announced the funding of a significant number of ***additional*** training places for the VET sector, through the *Productivity Places Program*.

Based on the current National Partnership Agreement with DEEWR[31], it is projected that South Australia could gain around 75,000 additional training places over the next five years – comprising 26,000 places for job seekers and 49,000 places for existing workers.

Not all of these ***places*** will translate into completed ***qualifications*** because: there is likely to be wastage from training; some individuals will use more than one place to complete a qualification (to gain a higher level qualifications requires more than one place); and some participants (particularly existing workers) may use the training to gain a skill set rather than complete a full qualification.

In this analysis, we assume that 85% of job seekers will complete their qualification, while existing workers will achieve a completion rate of 90%. While these completion rates are significantly higher than those being achieved for apprentices and trainees currently within the VET system, we are confident of high completion rates – at least over the next few years – for the following reasons.[32]

- For jobseekers, completion of the PPP is part of their agreement with their employment services provider; RTOs will be supporting jobseekers to finish the course in order to receive the completion payment; and in an economic downturn jobseekers are more likely to remain in their course to improve their chances of finding a job on completion.
- For existing workers, their participation in the PPP is negotiated with their employer and may be linked to a pay rise or other benefit upon completion; and the use of RPL up front will mean that for many students the length of time needed to complete a full qualification is relatively short.

31 This does not include the additional Structural Adjustment places announced in February 2009.
32 It is too early in the implementation phase of the PPP to use actual completion rates for these forward estimates.

Projecting the Supply of Qualifications continued

Based on these assumptions it is projected that there will be an additional 47,000 completed VET qualifications through the PPP over the next five years.

Table 7: **Projected PPP Completions by Qualification Level, 2007-08 to 2012-13**

Qualification Level	Completions
Advanced Diploma/Diploma	17,000
Certificate IV	14,000
Certificate III	9,000
Certificate II	7,000
Total	**47,000**

Combining these estimated PPP qualifications (47,000) with projections of "existing effort" (186,000) results in total projected supply through the publicly funded post school education and training system over the next five years of 233,000.

Table 8: **Projected Demand and Supply of Qualifications, 2007-08 to 2012-13**

Qualification Level	Demand	Supply (Publicly Funded)	Imbalance (Demand minus Supply)
Bachelor degree or higher	**67,000**	**62,000**	**5,000**
Advanced Diploma/Diploma	42,000	29,000	13,000
Certificate IV	44,000	41,000	3,000
Certificate III	86,000	59,000	27,000
Certificate II	11,000	35,000	-24,000
Certificate I	10,000	7,000	3,000
Total VET	**193,000**	**171,000**	**22,000**
Total	**260,000**	**233,000**	**27,000**

Comparing demand for qualifications with projected supply through the publicly funded system shows a shortfall of 27,000 qualifications over the five year period. Given the margins of forecasting error associated with this type of modelling, this imbalance is considered negligible.

Note: Appendix 2: *Industry Profiles and Priorities* and Appendix 3: *Regional Profiles and Priorities* are available online at **www.tasc.sa.gov.au**

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