SNOWY VALLEYS

2018 – 2022 REGIONAL ECONOMIC DEVELOPMENT STRATEGY
SUPPORTING ANALYSIS

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1. Preamble

The economic development strategy for the Snowy Valleys is presented in the 'Snowy Valleys Regional Economic Development Strategy 2018–2022' (the Strategy). This document, the 'Snowy Valleys Regional Economic Development Strategy 2018–2022: Supporting Analysis' (Supporting Analysis), prepared by Sensing Value, details the Strategy's methodology, evidence and development process. Both documents are available to the public at dpc.nsw.gov.au/cerd.

Both the Strategy and Supporting Analysis have been developed with the support of the NSW Government as part of the Regional Economic Development Strategies program to assist local councils and their communities in Regional NSW.

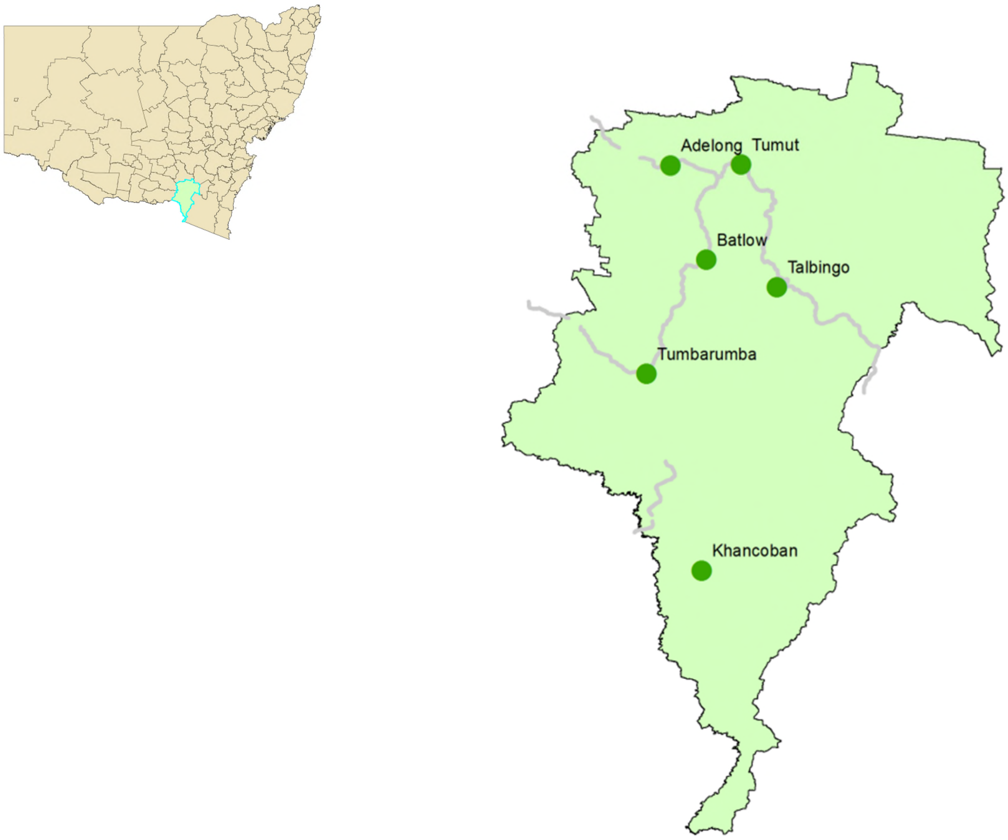
For further information about the program please contact the Centre for Economic and Regional Development (CERD) on 02 6391 3025 or CERD@dpc.nsw.gov.au.

2. Geographic information

The Snowy Valleys region is comprised of the LGA of Snowy Valleys Council. The region encompasses a total land area of 8,960 square kilometres and is located in the western foothills of the Snowy Mountains, bordered by Kosciuszko National Park in the east and the Murray Rive to the south.

Tumut and Tumbarumba, the two major industrial and population centres, are both within a three hour drive from Canberra International Airport. The local government area also includes the towns and villages of Adelong, Batlow, Brungle, Jingellic, Khancoban, Rosewood and Talbingo. The Snowy Mountains Highway is a major transport corridor within the LGA and connects with the Hume Highway. As at 2016, 4.4% of Snowy Valleys Council residents were of indigenous heritage.

Figure 1: Snowy Valleys region boundaries

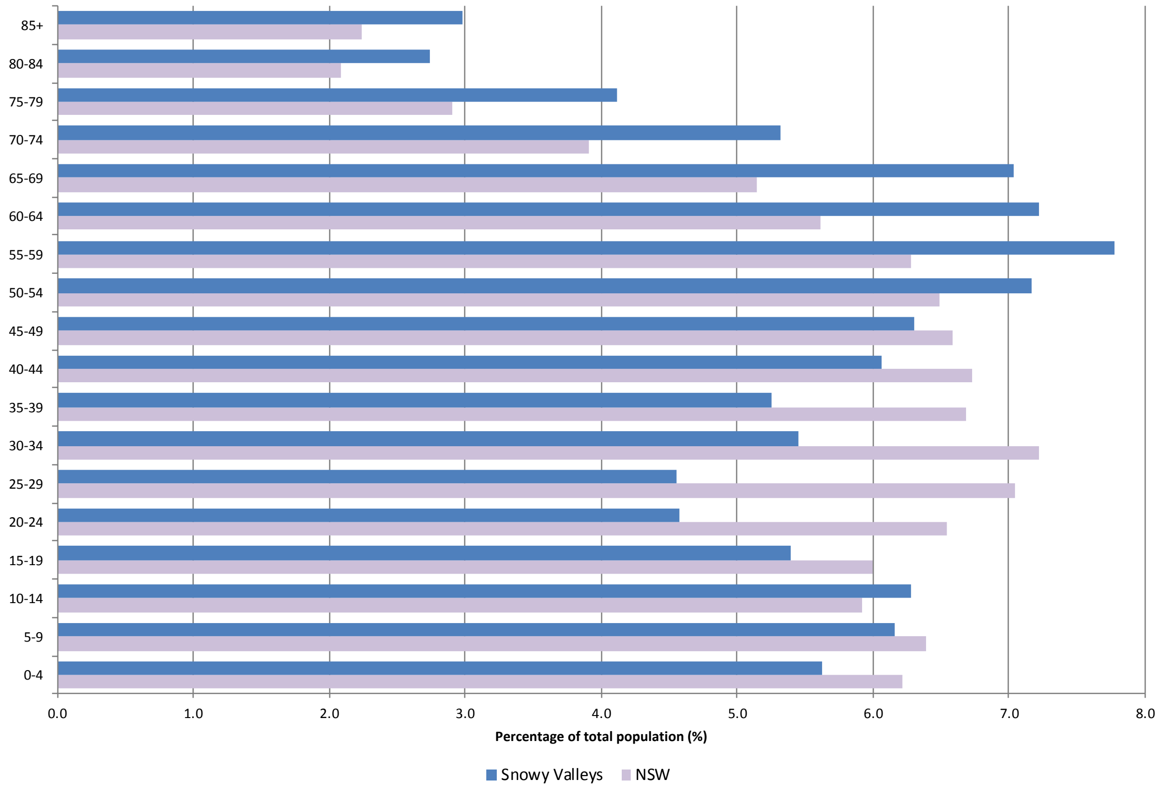


3. Demographic information

3.1. Population and housing

As of 2016, the population of the Snowy Valleys region has a higher proportion of older and retirement aged individuals compared to the NSW state average, as well as a significantly smaller proportion of working aged individuals from the ages of 15 to 49. This suggests the region as a whole has an aging population, and that many young people leave the region for educational or employment opportunities elsewhere.

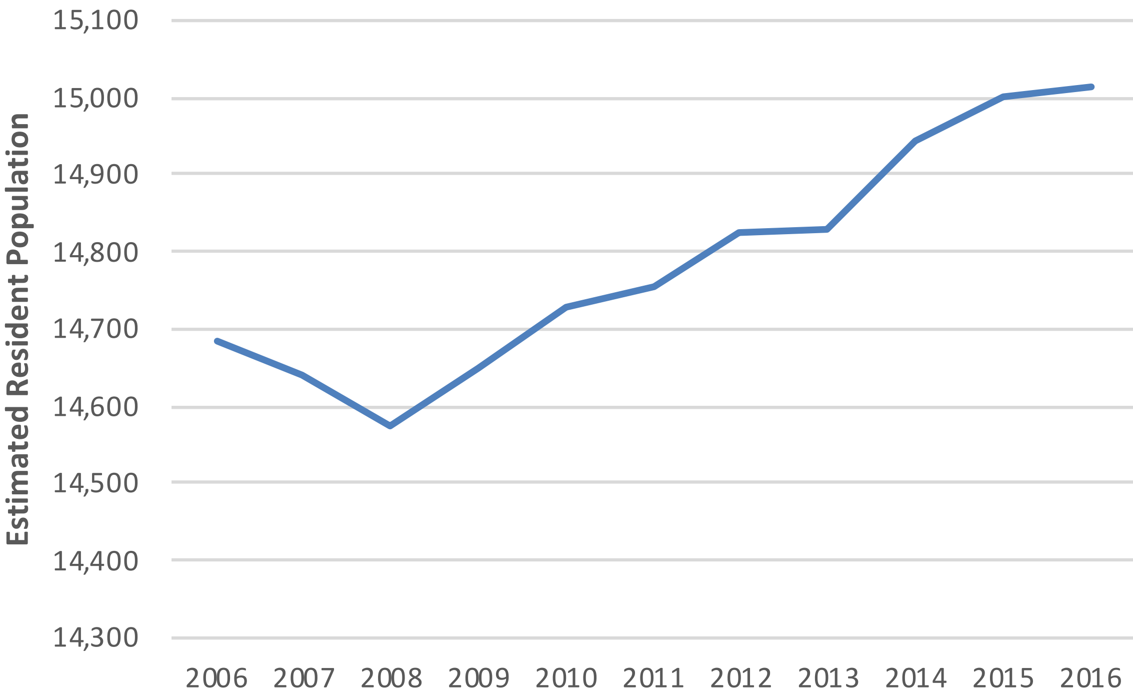
Figure 2: Population distribution in 2016 – Snowy Valleys compared with New South Wales



Source: ABS 2016 Census

An analysis of historical population growth over the past decade suggests that population growth in the Snowy Valleys has been consistently growing between 2008 and 2016, at a rate of 0.2 per cent per annum between 2006 and 2016 (see Figure 3 below).

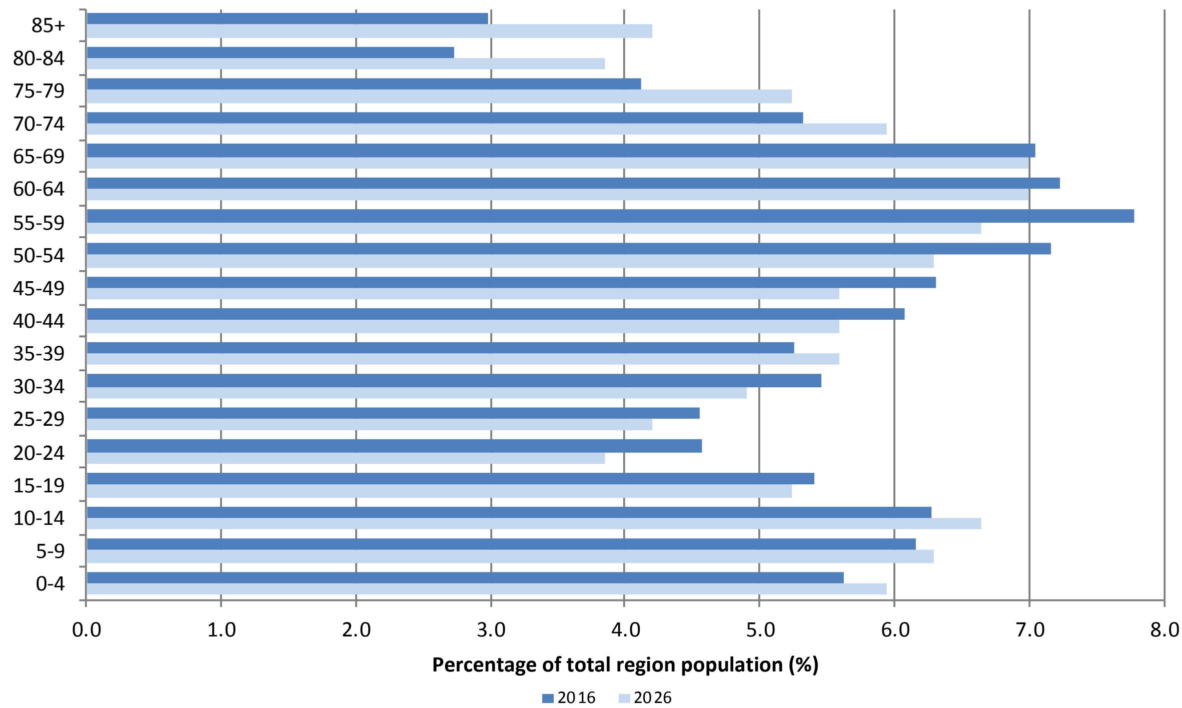
Figure 3: Population trends in the Snowy Valleys, 2006 to 2016



Source: Australian Bureau of Statistics 3218.0 - Regional Population Growth, Australia (2016)

Population projections from the NSW State Government suggest the region will continue to age, with significant growth expected in the 70+ age groups by 2026 that will become increasingly prominent proportion of the population. Other age groups are expected to decline, with the exception of 35-39 year old age group and children under the age of 14, which are expected to grow. This suggests that along its aging population, the region would also retain some young families who would age in place and raise their children in the region (see Figure 4 below).

Figure 4: Population distribution of the Snowy Valleys – 2016 vs. 2026

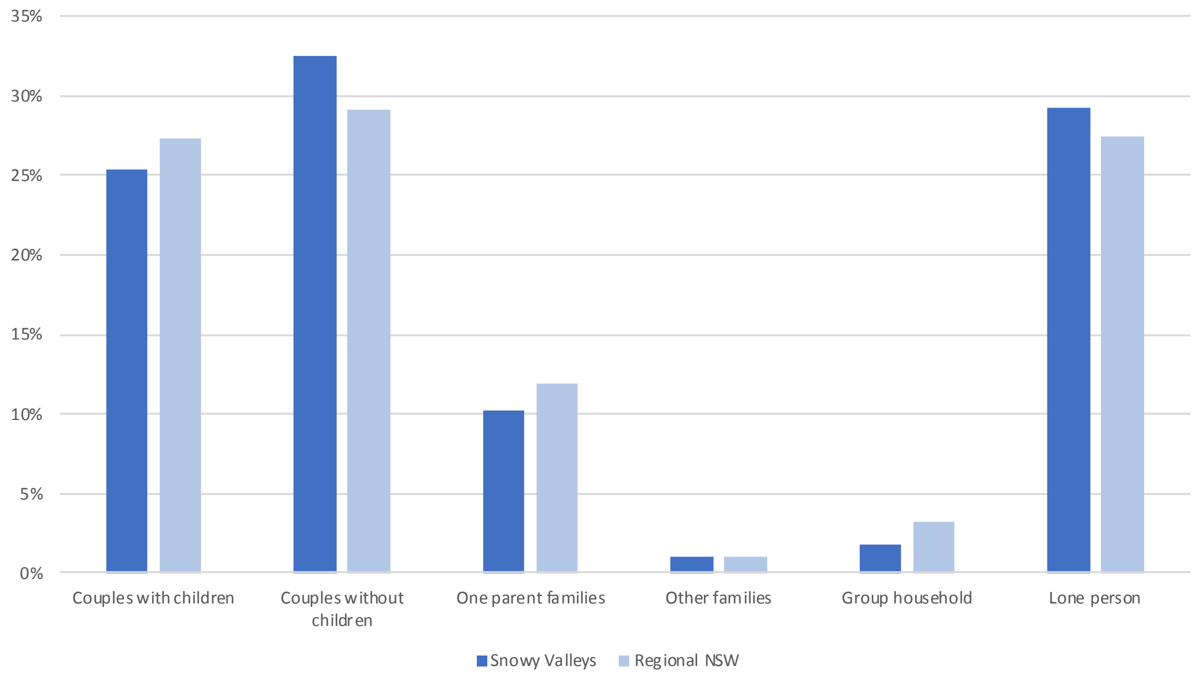


Source: ABS 2016 Census, NSW Department of Environment and Planning Population Projections

Figure 5 below includes an analysis of the household composition statistics for the Snowy Valleys shows some differences to the average observed across Regional NSW. Overall, the region has:

- A lower proportion of couples with children, one parent families and group households
- A higher proportion of couples without children and lone person households
- A similar proportion of other types of family households.

Figure 5: Household composition of Snowy Valleys vs. Regional NSW, 2016



Source: ABS 2016 Census

3.2. Education and workforce

A review of the region's educational attainment from the ABS 2016 Census (see Table 1 below) suggests that the region generally has a lower proportion with post-school qualifications (all types) when compared to the Regional NSW average. Most notable in these statistics is a significantly smaller proportion of individuals with Bachelor of Postgraduate Qualifications compared to the Regional NSW average. This suggests that businesses in the region may need to look outside the region for skilled labour and may have issues with sourcing the required skills from the local labour force.

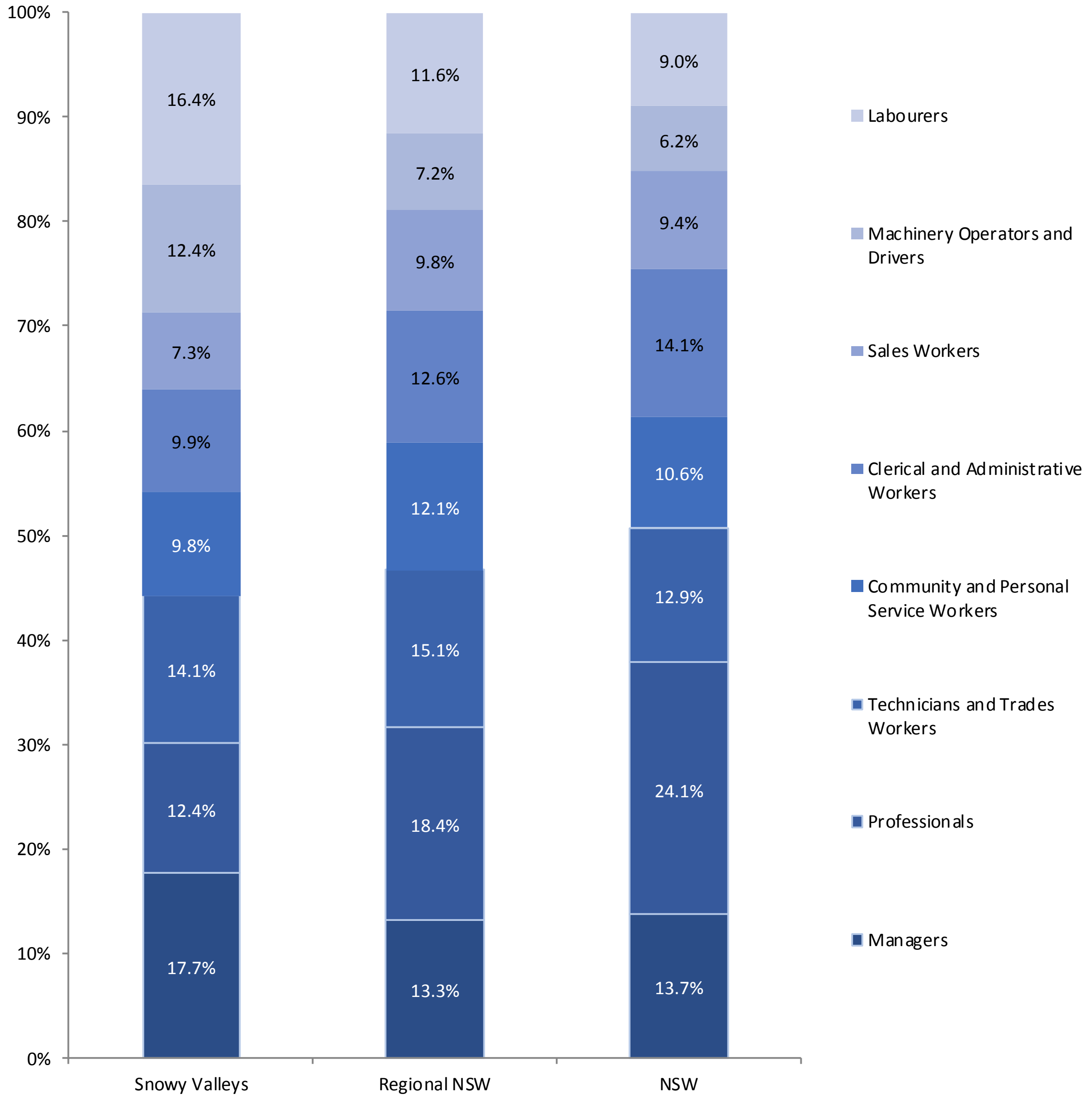
Table 1: Educational attainment (population aged 15 years and over) – 2016

	Snowy Valleys	Regional NSW	New South Wales
Bachelor's Degree and Above (%)	9.6	14.5	23.4
Advanced Diploma and Diploma level (%)	7.0	8.2	8.9
Certificate Qualification (%)	22.4	23.6	18.1
Population with a Post-School Qualification (%)	39.1	46.2	50.4

Source: ABS 2016 Census

Figure 6 on the following page includes an analysis of the occupations in the Snowy Valleys reveals a fairly different occupational profile to the Regional NSW average. The region has a noticeably higher proportion of its workforce as both Managers, Labourers and Machinery Operators and Drivers (likely a reflection of the importance of agricultural sectors in the region, with farmers being classified as Managers), as well as a lower proportion of Professionals and Clerical and Administrative Workers.

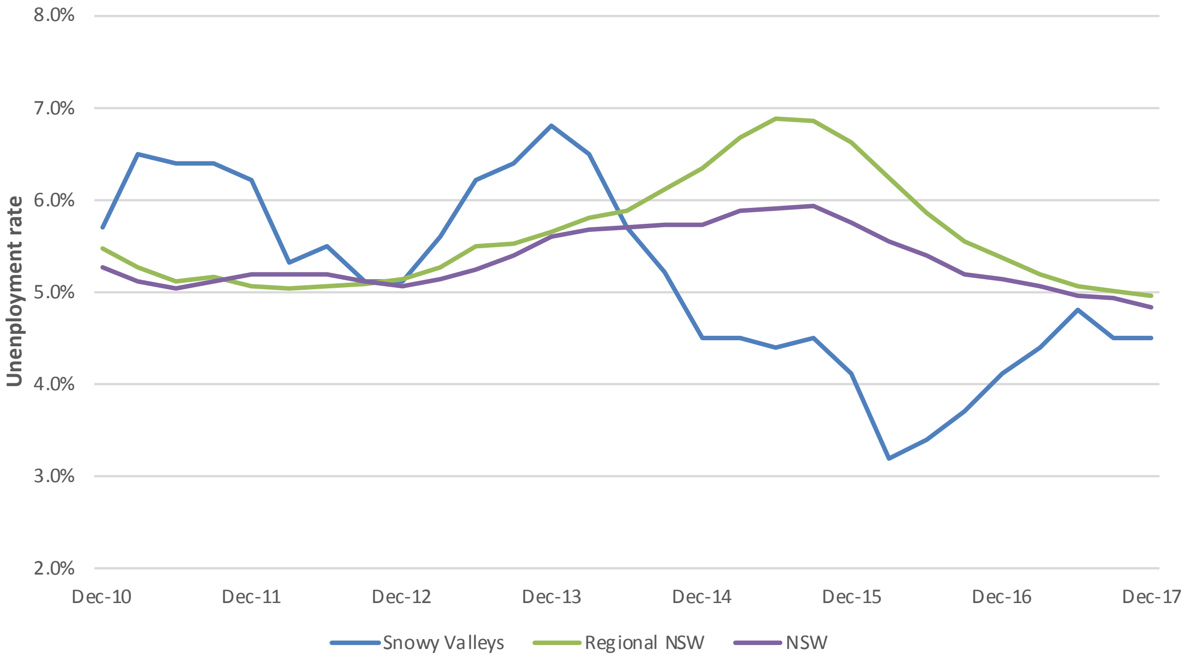
Figure 6: Occupational breakdown of the Snowy Valleys, 2016



Source: ABS 2016 Census

According to data from the Department of Jobs and Small Business, 7,244 people living in the Snowy Valleys region were in the labour force, with an unemployment rate of 4.5% in December 2017, which was below the unemployment rates for Regional NSW (5.4%) and NSW (4.8%) (See Figure 7 below). The region has historically enjoyed lower than state average levels of unemployment since mid 2014, although it has begun to increase since December 2015.

Figure 7: Unemployment rates from December 2010 to December 2017



Source: Department of Jobs and Small Business, Small Area Labour Markets (December 2017)

3.3. Worker location and movements

An analysis of Place-of-Work data in the region can provide some insight into movements between the Snowy Valleys and surrounding LGAs. Snowy Valley's Employment Self-Containment[1] (ESC) score suggests that approximately 12 per cent of the workers who live in the Snowy Valleys work in another LGA.

Conversely, Employment Self-Sufficiency[2] (ESS) indices, which describe the ratio of local jobs filled by local residents, suggest that a high proportion of local jobs are filled by people who live locally, with only 11 per cent of jobs filled by workers who live outside the LGA. (see Table 2 below).

Table 2: Employment sufficiency and containment in the Snowy Valleys, 2016

	Snowy Valleys
Total local workers (working anywhere)	5,990
Number of jobs in local area	5,894
Number of local jobs held by locals	5,267
Number of locals employed outside the LGA	723
Employment self-containment (ESC)	**0.88**
Employment self-sufficiency (ESS)	**0.89**

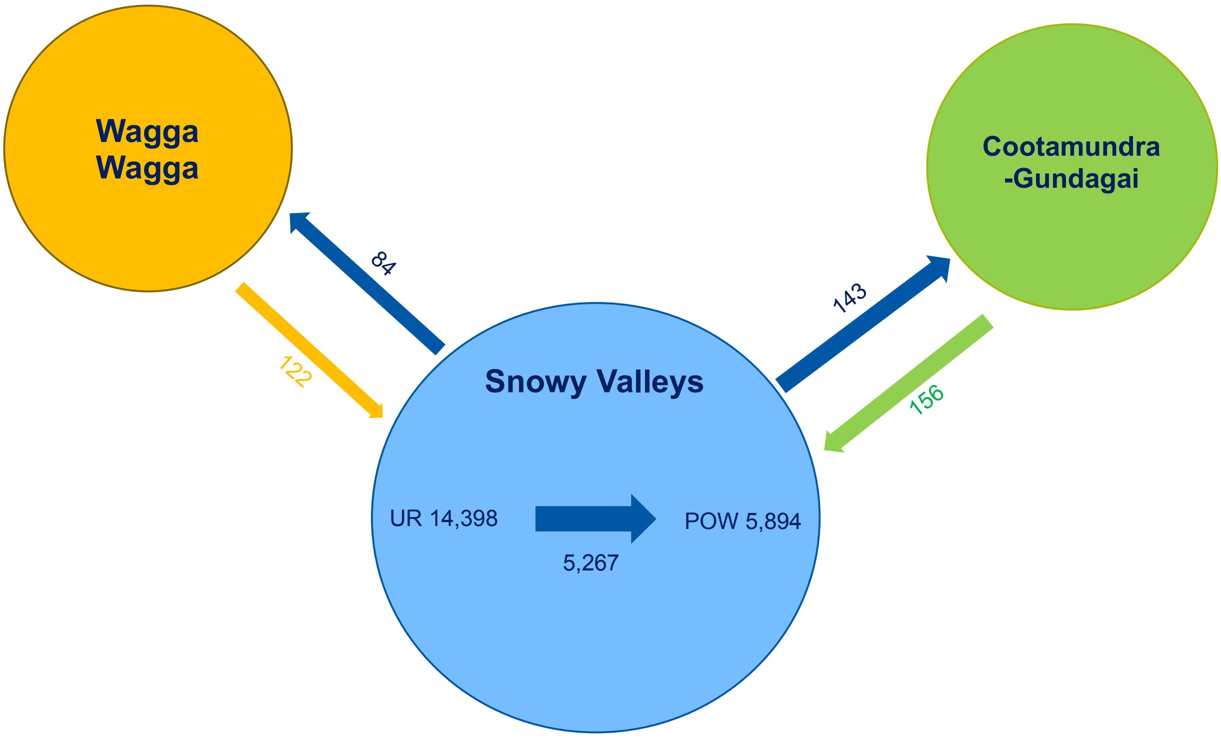
Source: ABS 2016 Census

The two LGAs which Snowy Valleys appears to have the most journey-to-work linkages appear to be Cootamundra-Gundagai and Wagga Wagga, although these figures are relatively minor compared to the overall proportion of people who both live and work in the Snowy Valleys. The journey-to-work movements of Snowy Valleys with these two LGAs is summarised in Figure 8 on the following page.

[1] The Employment Self-Containment index describes the percentage of employed residents who are employed within the boundaries of the LGA.

[2] The Employment Self-Sufficiency index describes the percentage of local jobs that are filled by local residents for a given LGA.

Figure 8: Flowchart of worker movements between Snowy Valleys and key neighbouring LGAs



Source: ABS 2016 Census

4. Endowments

4.1. Infrastructure audit

The Infrastructure and Natural Endowment audit aims to provide an overview of the economic infrastructure and major natural endowments currently located within the Snowy Valleys.

Infrastructure is an important enabler of economic activity, economic development and growth. Customers and businesses rely upon the physical and organisational structures and facilities that exist in a region, or that link regions to other parts of the country or globe.

With regards to infrastructure, while this primarily includes hard infrastructure such as roads, ports and buildings, it can also extend to soft infrastructure (such as institutions and services) and smart infrastructure (such as technologies that use and improve existing telecommunication and information networks).

There are a number of critical pieces of economic infrastructure in the Snowy Valleys. These are summarised in Table 4 below.

Table 4: Critical economic infrastructure in the Snowy Valleys

Infrastructure	Type of infrastructure	Location	Source of economic importance
Snowy Mountains Hwy	Hard	Whole of FER	▪ Major freight and passenger corridor connecting the LGA to the Hume Highway and Snowy Monaro Regional Council
Wood mills ▪ Hyne Mill ▪ Visy and Carter Holt Harvey mills	Hard	Tumbarumba and Tumut	▪ The Hyne mill (Tumbarumba), Visy and Carter Holt Harvey Mills (Tumut) are key infrastructure for the wood processing industry
Snowy Hydro Infrastructure	Hard	Snowy Valleys	▪ Major infrastructure endowment that drives the Electricity Generation industry in the FER
Regional Hospitals ▪ Tumut District Hospital ▪ Tumbarumba Multi-Purpose Service ▪ Batlow/Adelong Multi-Purpose Service	Hard	Snowy Valleys	▪ Provides health services to the significant and growing aging population, as well as providing health amenities for the wider community

Infrastructure	Type of infrastructure	Location	Source of economic importance
Mannus Correctional Facility	Hard	Tumbarumba	▪ Major employer in the Public Safety and Administration sector
NBN	Smart	Snowy Valleys	▪ Enables organisations and individuals to work and operate remotely, increasing the appeal of the FER as a potential place to live ▪ Potential to drive innovation and growth in businesses and organisations in the FER ▪ Potential to enable service and knowledge industries including healthcare and social assistance, finance and insurance, retail and tourism to deliver improved service ▪ Improves consistency and reliability of telecommunications and financial transactions

4.2. Institutional audit

Institutions play a fundamental role in the economic development process. Before a REDS strategy can be formulated, the local institutional capacity must be evaluated. A successful economic development strategy for the Snowy Valleys economy is one that capitalises on the institutional strengths that exist in the region. This section lists the key institutions in the Snowy Valleys region as well as their:

- role in the economic future of the Snowy Valleys region
- important linkages to other institutions.

The Institutional Audit aims to identify and consider the institutional preparedness for delivering the actions identified in the REDS Action Plan. The audit will provide information on the breadth and depth of institutions in the region to identify the current institutional capacity and capabilities of the region and the potential. It is expected that the Institutional Audit would be continually updated throughout the development of the REDS and should be treated as a live document.

Figure 8: List of major economic institutions in the Snowy Valleys

Local Government

- Snowy Valleys Regional Council

State and Federal Government

- Office of Regional Development
- Department of Health
- Department of Primary Industries
- National Parks and Wildlife Service

Joint organisations

- RDA Riverina
- REROC

Key industry organisations

Softwood timber sector
- Forestry Corporation of NSW
- Visy
- Carter Holt Harvey
- Hyne Timber

Tourism organisations
- Destination NSW
- Destination Riverina Murray
- Riverina Regional Tourism
- Tourism Snowy Mountains

Snowy Hydro Limited

Key networks and community organisations

Chambers of Commerce
- Tumbarumba
- Tumut

Each of these institutions is discussed in Table 6 below.

Table 6: Summary of key institutions in the Snowy Valleys

Institution	Type	Description of potential role in REDS	Key linkages
Snowy Valleys Regional Council	Local Government	Key driver: Owner of the REDS, with responsibility for updating and managing the document, delivery of actions and engagement with stakeholders	▪ RDA Riverina ▪ REROC ▪ Tourism Organisations ▪ Chambers of Commerce
Office of Regional Development	State Government	Advocacy and engagement: Provides facilitation and coordination role for the whole-of-region approach to economic development	▪ Snowy Valleys Regional Council ▪ Department of Health ▪ Department of Primary Industries ▪ Tourism Organisations
Department of Health	State Government	Industry advocacy and insight: Responsible for management of major hospitals and delivery of health care services throughout the region	▪ Snowy Valleys Regional Council ▪ Office of Regional Development ▪ Murrumbidgee Local Health District
Department of Primary Industries	State Government	Industry advocacy and insight: Major NSW state government agency responsible for development of agricultural industries in the region – could provide facilitation and coordination role for regional agricultural and aquaculture industry	▪ Snowy Valleys Regional Council ▪ Office of Regional Development ▪ Forestry Corporation NSW
National Parks and Wildlife Service	State Government	Industry advocacy and insight: Major NSW state government agency responsible for parks management and a major employer in the region	▪ Snowy Valleys Regional Council ▪ Department of Primary Industries ▪ Forestry Corporation NSW
Regional	Joint Organisation	Advocacy and engagement:	▪ Snowy Valleys Regional

Institution	Type	Description of potential role in REDS	Key linkages
Development Australia (RDA) Riverina		Provides advocacy and leadership on regional priorities and works with stakeholders to develop actions and priorities consistent with those identified in the REDS	Council ▪ Tourism Organisations ▪ Chambers of Commerce
Riverina Eastern Organisation of Regional Councils (REROC)	Joint Organisation	Advocacy and engagement: Provides advocacy and leadership on regional priorities and works with stakeholders to develop actions and priorities consistent with those identified in the REDS	▪ Snowy Valleys Regional Council ▪ Office of Local Government ▪ Tourism Organisations ▪ Chambers of Commerce ▪ Department of Premier and Cabinet
Softwoods Timber sector ▪ Forestry Corporation of NSW ▪ Visy ▪ Carter Holt Harvey ▪ Hyne Timber	Key industry organisations	Industry advocacy and insight: Major employers and industry leaders for a sector that could drive future economic growth	▪ Snowy Valleys Regional Council ▪ Department of Primary Industries ▪ National Parks and Wildlife Service
Tourism Organisations ▪ Destination NSW ▪ Destination Riverina Murray ▪ Riverina Region Tourism ▪ Tourism Snowy Mountains	Key industry organisations	Industry advocacy and insight: Key organisations that develop and advocate for strategies and actions relating to regional tourism industry	▪ Snowy Valleys Regional Council ▪ Tourism businesses
Chambers of	Key network and	Advocacy and engagement:	▪ Snowy Valleys Regional

Institution	Type	Description of potential role in REDS	Key linkages
Commerce ▪ Tumut ▪ Tumbarumba	community organisations	Representative bodies of businesses in the region – advocacy and engagement role for projects and actions relating to retail and hospitality businesses, which form a significant component of the region's tourism sector	Council ▪ Tourism organisations

4.2.1. Institutional capacity

Local Government

Stakeholders suggest that the Snowy Valleys Regional Council maintains good linkages with their local industries and communities, as well as working together to achieving collective goals through action in the joint organisations (RDA Riverina and REROC). However, given the recency of its formation, the economic development capability of the council is currently limited.

Commonwealth Government

A number of Commonwealth agencies have key enabling roles to support the economic development activities in the REDS, but are not actively involved with the implementation of the Strategy.

Tourism organisations

Tourism organisations in the region receive funding from State and Local governments, but generally do not actively own and implement the priorities identified in the REDS. However, they assist via the development of documents and strategies such as the Destination Management Plan, attracting investment for tourism assets and assist in the development of tourism products throughout the region. For the Snowy Valleys region, which has a significant tourism offering (particularly in its growing horticultural sector) this strategy will have major significance for the strategic direction of the region going forward.

Chambers of commerce

Community organisations, including the Chambers of Commerce in Tumut and Tumbarumba, play an active role in the regional economy and community. These groups have an important role in building support for actions identified in the REDS.

Industry sectors (Manufacturing, Health Care and Social Assistance, Defence)

Many of the major employers across the region report facing a range of issues identified through the REDS process. While they may not necessarily take an ownership role in the implementation of the actions identified in the REDS, they can provide sector-specific insight to support the case for investment into enabling infrastructure.

4.3. Natural endowments

While not built infrastructure, there are other endowments such as local amenity and natural capital that can be major assets for a number of sectors. The Snowy Valleys benefits from a number of natural endowments, including:

Natural assets and liveability – The region has a has a number of major natural assets that can be leveraged for economic growth and amenity and lifestyle benefits. The region has an abundance of softwood plantations in Tumbarumba that form the basis of the region's forestry and timber product industry, as well as being home to the Snowy River. The region is also home to a number of major snowfields as a result of the Kosciuszko National Park, which provide a significant tourism draw each year.

Location – The Snowy Valleys is located within driving distance from each of the capital cities of Melbourne, Sydney and Canberra.

4.4. Built endowments

Snowy Mountains Scheme – The region is home to the Snowy Mountains Scheme (Snowy Hydro), which forms a major part of the employment base in the Electricity Generation sector across the sixteen dams. With the planned expansion of the scheme in Snowy 2.0, this endowment is expected to continue to grow in significance for the region, both with respect to short-term demand for construction, retail and accommodation services and long-term demand in the Electricity Generation sector.

Mannus Correctional Facility – The presence of the Mannus Correctional Facility in the region creates a relatively consistent source of demand for local goods and services that allows the region to be more economically resilient, as well as providing a source of local skilled workers for the wider region.

4.5. Human endowments

Retiree population - The Snowy Valleys region has a significant aging population that is expected to continue to grow into the future as a result of the lifestyle and amenity appeal of the region. This cohort will have particular health and lifestyle demands that could potentially be leveraged to drive future economic growth.

5. Specialisations

5.1. Input-Output Analysis

5.1.1. Gross value added

As of 2016, the Snowy Valleys had an estimated Gross Regional Product of $841 million. An assessment of the value-added by each industry in the Snowy Valleys allows us to identify the contribution of major economic industries in the region to this figure (see Table 7 below).

Table 7: Major sectors in the Snowy Valleys by value added, 2015–16

	IOIG sector	Value added ($m)
1	Sheep, Grains, Beef and Dairy Cattle	163.9
2	Paper Stationery and Other Converted Paper Product Manufacturing	157.9
3	Electricity Generation	112.9
4	Heavy and Civil Engineering Construction	111.1
5	Sawmill Product Manufacturing	110.0
6	Retail Trade	59.7
7	Other Agriculture	57.8
8	Construction Services	57.0
9	Forestry and Logging	49.7
10	Road Transport	47.7

Source: NSW Department of Premier and Cabinet Input-Output (IO) model (2017)

While not included in the above table, other important sectors in the region outside the top 10 included Meat and Meat Product Manufacturing, Road Transport, Primary and Secondary Education and Residential Care and Social Assistance.

Based on value-added, it appears that the key industries in the Snowy Valleys region that could be considered drivers of the current economy include:

- Sheep, Grains, Beef and Dairy Cattle
- Paper Stationery and Other Converted Paper Product Manufacturing
- Electricity Generation
- Sawmill Product Manufacturing

- Forestry and Logging.

While construction and related services are significant sectors from a value-added perspective, these are typically transient industries that exist primarily to support the population and are unlikely to be sustainable long-term drivers of growth without accompanying growth in other key industry sectors. However, with the potential construction for Snowy 2.0 scheduled in the near future, these sectors are likely to continue to be major value-add and employing sectors for the foreseeable future.

5.1.2. Exports

An assessment of the major exports from the region can identify the sectors that have the potential to be drivers of economic growth. Beef cattle and processed wood and paper products are the largest value-add exports in the region (see Table 8 below). This is consistent with the identification of these sectors as major value-added industries identified in Table 7.

Table 8: Major exporters in the Snowy Valleys by value of exports, 2015–16

	IOIG sector	Value of exports ($m)
1	Sheep, Grains, Beef and Dairy Cattle	77.7
2	Sawmill Product Manufacturing	32.8
3	Paper Stationery and Other Converted Paper Product Manufacturing	22.7
4	Accommodation	9.6
5	Road Transport	7.9
6	Wholesale Trade	6.9
7	Other Agriculture	4.1
8	Professional, Scientific and Technical Services	4.1
9	Fruit and Vegetable Product Manufacturing	2.8
10	Retail Trade	2.7

Source: NSW Department of Premier and Cabinet Input-Output model (2017)

5.1.3. Imports

An assessment of the major imports to the region can also provide insight into sectors whose costs are driven by the transport of goods. In the Snowy Valleys, Electricity Generation (i.e. Snowy Hydro) is the largest importer with Construction, Paper Product Manufacturing and Beef Cattle Farming also amongst the region's largest importers (see Table 9 on the following page).

Table 9: Major importers in the Snowy Valleys by value of imports, 2015–16

	IOIG sector	Value of imports ($m)
1	Electricity Generation	37.3
2	Heavy and Civil Engineering Construction	25.6
3	Paper Stationery and Other Converted Paper Product Manufacturing	23.0
4	Sheep, Grains, Beef and Dairy Cattle	22.9
5	Road Transport	11.1
6	Forestry and Logging	10.1
7	Construction Services	9.8
8	Electricity Transmission, Distribution, On Selling and Electricity Market Operation	9.7
9	Retail Trade	9.3
10	Professional, Scientific and Technical Services	9.2

Source: NSW Department of Premier and Cabinet Input-Output model (2017)

5.1.4. Input-output cluster analysis

Based on the data from the NSW Government’s input-output model, it is also possible to identify some potential industry clusters that exist in the Snowy Valleys region. These clusters are based on input and output linkages between different industries identified in the input-output model, and can provide a basis for identifying industries which have developed a critical mass in economic activity that can be leveraged to drive further growth.

In the Snowy Valleys region, there appear to be clusters in the following areas (based on the value added between sectors):

Forestry and timber product manufacturing – There appears to be a cluster built around the forestry sector in the FER, which includes the logging and processing of the FER’s significant softwood plantations. This includes a value chain connecting a number of sectors including:

- Forestry and Logging
- Sawmill Product Manufacturing,
- Other Wood Product Manufacturing
- Pulp, Paper and Paperboard Manufacturing
- Paper Stationery and Other Converted Paper Product Manufacturing.

A number of the sectors also have input linkages to a number of other sectors in the region. The Forestry and Logging sector has input linkages to Agriculture, Forestry and Fishing Support services, Sawmill Product Manufacturing sector has significant input linkages to the Road Transport sector and Paper Stationery and Other Converted Paper Product Manufacturing has input linkages to Electricity Supply.

Agriculture – There appears to be a cluster built around agriculture in the region, notably around the Sheep, Grains, Beef and Dairy cattle sector and the Other Agriculture sector (which includes the region's horticulture sectors). Both the Sheep, Grains, Beef and Dairy Cattle Farming sector and the Other Agriculture have strong input linkages with each other as well as the Agriculture, Forestry and Fishing Support Services sector.

Both sectors have some output linkages to their respective Food Product Manufacturing sectors (Meat and Meat Product Manufacturing and Fruit and Vegetable Product Manufacturing) within the region, but it appears the majority of the products for both sectors are exported out of the region.

5.2. Tourism

For many regional areas, tourism has become an increasingly significant component of their current and future economic profile. However, the nature of the tourism sector being a mix of activities across various industry sectors means that economic data on the sector is not always readily available. While sectors such as Accommodation, Food and Beverage Services and Retail are sometimes used separately and in aggregate to act as a proxy for tourism statistics, these measures often present an incomplete picture of tourism for a given region.

5.2.1. Tourism Research Australia

While not producing the same type of economic data as used in traditional industry analysis, Tourism Research Australia (TRA) produces tourism profiles that provide key statistics for considering the tourism sector at a broader regional level. These statistics are summarised in Table 10 for the Snowy Valleys.

Table 10: Tourism statistics for the Snowy Valleys LGA, 2016

Snowy Valleys	
No. tourism businesses	168
No. of visitors (‘000s)	353
Average no. of nights stayed	3
Most common type of visitor	Domestic day (216,000)
Most common reason for visiting	Holiday
Most common form of accommodation during visit	Other
Estimated value of total spend from visitors ($m)	73
Average spend per trip ($)	205

]Source: Tourism Research Australia Economic Profiles by LGA (2017)

The majority of visitors to the Snowy Valleys LGA are domestic day trippers, with domestic overnight tourists also forming a significant component of the visitor base. International visitors to the region are relatively rare, accounting for a little over 1% of all visitors to the LGA.

The primary reason stated for reason of visit for domestic visitors to the LGA is for holidays, and these tend to be groups (i.e. either families, couples or groups of friends/family) rather than single travellers.

The average spend per trip for visitors to the LGA was significantly lower than the Regional NSW average of $476. An element of this spending disparity could also be attributed to the lower proportion of visitors who either daytrip to the region or visit using caravans, rather than electing for commercial accommodation.

This tourism profile suggests the Snowy Valleys region has a primarily domestic-based visitor base that visits the region for short (less than a week) trips. In order to grow this industry going forward, it is likely that the priorities needed would aim to provide services or attractions that appeal to domestic travellers, such as gourmet food and drinks and arts and cultural assets, potentially leveraging off the region's agricultural and built endowments.

5.2.2. Input-Output Data

Using tourism visitation and expenditure data, the CERD has used Input-Output modelling to estimate the direct impact of tourism on the regional economy of the Snowy Valleys. This data indicated that in 2015–16, tourism directly contributed $22.3 million in value-added, as well as being directly responsible for 458 Full Time Equivalent jobs. This accounted for $35.8 million in household income (wages).

5.3. Shift-Share analysis

Shift-share analysis is a widely used technique to analyse regional economies where there is a specific interest in the growth or decline in a particularly macroeconomic variable; most often employment. The interest in shift-share analysis arises from its ability to partition employment change in a given region into three distinct components:

- Changes in regional employment resulting from changes in the state economy. That is, employment will increase or decrease as a result of broader economic conditions. This component is called the State Shift.
- Changes in regional employment that are a result of broader industry specific trends. For example, an increase in demand for agricultural products will result in an increase in employment in agricultural industries. This component is called the Industry Mix Shift.
- Finally, changes in employment which results from unique regional factors that are not related to broader economic and industry factors. This component is called the Regional Shift, and it is a reflection of the role of endogenous factors influencing the employment performance of the regional economy.

The total employment change in the region is called the Total Shift.

Shift-share analysis is concerned with the ‘share’ that each of these ‘shifts’ hold in the total change in employment (the Total Shift). This relationship is also described by the following expression.

Total Shift = State Shift + Industry Mix Shift + Regional Shift

The Regional Shift component is of most interest to those involved in regional economic development. This is the residual change for the region, after accounting for State Shift and Industry Mix Shift, and is attributed to characteristics or competitiveness unique to the region. This value may be positive or negative.

Table 11 below shows the regional shift (number) in employment growth for all ANZSIC industries employing more than 5% of the region’s workforce in 2011. The total growth in employed persons between 2011 and 2016 has been split into the three components: State Shift, Industry Mix Shift and Regional Shift. The Regional Shift component indicates that, after controlling for the growth in total employment and employment in these industries at the state level, employment in the following industries grew faster than in the rest of the state. In the Snowy Valleys, the Regional Shift component for the Agriculture, Forestry and Fishing, Manufacturing and Public Safety and Administration sectors were all positive during this period.

Table 11: Shift-Share Analysis of key industries in the Snowy Valleys with the highest RS share

	Number employed in 2011	Industry size (%)	State Effect	Industry Effect	Regional Shift	Growth in employment to 2016
Agriculture, Forestry and Fishing	914	16.5	98	-42	60	116
Manufacturing	881	15.9	94	-305	185	-26
Health Care and Social Assistance	533	9.6	57	38	-73	22
Retail Trade	614	11.1	66	-53	-124	-112
Accommodation and Food Services	381	6.9	41	19	-30	30
Education and Training	379	6.8	41	14	-27	27
Construction	320	5.8	34	51	-77	8
Public Administration and Safety	290	5.2	31	-10	16	37

Source: ABS 2016 and 2011 Census data and Sensing Value analysis

However, caution should be exercised in the interpretation of these results as they are based on 'point in time' measures. It is important to account for the factors such as localised variation in seasonal conditions between 2011 and 2016 that impacted the Regional Shift over the period, rather than systemic factors inherent to the regional economy.

In addition, it may be useful to consider Shift-Share Analysis across different ANZSIC levels. Shift-share Analysis for employment by industry at the ANZSIC Division, Subdivision, Group and Class levels for sectors contributing greater than 1% of employment was undertaken. Sectors at each level of analysis where the Regional Shift is positive, indicating growth due to some regional advantage, are summarised in Figure 9 on the following page. The first ANZSIC level that regional advantage occurs is in bold. This indicates that the Snowy Valleys could have some form of potential competitive advantage in the following sectors:

- Administration and Support Services
- Mining
- Manufacturing
- Agriculture, Forestry and Fishing
- Public Administration and Safety
- Electricity, Gas, Water and Waste Services

- Transport, Postal and Warehousing
- Accommodation
- Repair and Maintenance
- Allied Health Services
- Other Social Assistance Services
- Pharmaceutical and Other Store-based Retailing.

Figure 9: Regional Shift (RS, in %) between 2011 and 2016 for Largest Industries (>1% Regional Employment)

ANZSIC Division (1-Digit)	RS	ANZSIC Subdivision (2-Digit)	RS	ANZSIC Group (3-Digit)	RS	ANZSIC Class (4-Digit)	RS
Administrative and Support Services	72%	Administrative Services	70%				
		Building Cleaning, Pest Control and Other Support Services	7%	Building Cleaning, Pest Control and Gardening Services	18%	Building and Other Industrial Cleaning Services	12%
Mining	71%						
Manufacturing	32%	Pulp, Paper and Converted Paper Product Manufacturing	52%	Converted Paper Product Manufacturing	31%	Corrugated Paperboard and Paperboard Container Manufacturing	31%
		Wood Product Manufacturing	44%	Log Sawmilling and Timber Dressing	46%	Log Sawmilling	65%
						Timber Resawing and Dressing	36%
Agriculture, Forestry and Fishing	30%	Forestry and Logging	37%	Forestry and Logging	71%	Logging	56%
						Forestry	46%
						Apple and Pear Growing	6%
		Agriculture, Forestry and Fishing Support Services	18%	Sheep, Beef Cattle and Grain Farming	36%	Beef Cattle Farming (Specialised)	65%
						Sheep-Beef Cattle Farming	0.2%
Public Administration and Safety	28%	Public Order, Safety and Regulatory Services	9%				
		Public Administration	6%	Local Government Administration	59%	Local Government Administration	59%
Electricity, Gas, Water and Waste Services	28%	Electricity Supply	31%	Electricity Generation	15%		
Transport, Postal and Warehousing	9%	Road Transport	10%	Road Freight Transport	32%	Road Freight Transport	32%
Accommodation and Food Services		**Accommodation**	21%	Accommodation	38%	Accommodation	39%
		Food and Beverage Services		Clubs (Hospitality)	71%	Clubs (Hospitality)	70%
Other Services		**Repair and Maintenance**	11%	Automotive Repair and Maintenance	9%		
Health Care and Social Assistance		*Medical and Other Health Services*		**Allied Health Services**	69%		
		Social Assistance Services		**Other Social Assistance Services**	2%	Other Social Assistance Services	2%
Retail Trade		*Other Store-Based Retailing*		**Pharmaceutical and Other Store-Based Retailing**	25%	Pharmaceutical, Cosmetic and Toiletry Goods Retailing	3%

Note: Sectors in *italics* indicate no specialisation at this level of disaggregation but are included so that it is clear what ANZSIC Divisions, Subdivision and Groups a sector with a specialisation belongs to. Sectors in **bold** indicate the first level that a specialisation occurs.

5.4. Location Quotient Analysis

A simple form of analysis that can be used to gain an understanding of a region's competitive advantages is the Location Quotient (LQ) which measures the employment concentration in industry sectors within a regional economy, compared with the same sectors across NSW[3]. The higher the LQ, the more specialised a region is in that industry within NSW, based on the scale of the sector's employment declines relative to the state average. For the purpose of this analysis, specialisations as defined by LQs, are in turn used as a proxy measure for those sectors and industries that represent a region's true competitive advantages.

Importantly, while LQs are used in this document for that purpose, they are only a partial measure of those competitive advantages, and it is important that this definition is based on relative employment declines and increases. Nonetheless, they provide useful insight into sectors that may have a potential regional advantage, and as such, the LQs have been considered alongside additional qualitative evaluations and data analysis, such as Input-Output analysis, to arrive at the findings for the Snowy Valleys REDS.

In the Snowy Valleys, a number of sectors in the forestry and wood product manufacturing sectors have the highest LQ. Agriculture also features in the highest LQs in the region, across horticulture, beef cattle and a small number of dairy farmers. Electricity Generation also has a high LQ on account of Snowy Hydro. The top 10 sectors in the region ranked by Location Quotient are summarised in Table 12 below.

Table 12: Top 10 sectors in the Snowy Valleys by Location Quotient (for sectors which employ at least 40 people)

	ANZSIC sector (3-digit)	Employment (2016)	% change compared to industry average between 2011–2016	Location Quotient
1	Log Sawmilling and Timber Dressing	410	33.8%	98.82
2	Forestry and Logging	198	44.1%	70.33
3	Converted Paper Product Manufacturing	223	21.2%	32.76
4	Electricity Generation	132	5.1%	28.36
5	Fruit and Tree Nut Growing	167	-32.4%	16.72
6	Dairy Cattle Farming	51	-2.2%	8.04
7	Sheep, Beef Cattle and Grain Farming	504	14.8%	7.34

[3] A region's competitive advantage for an industry includes its ability to produce goods and services at a lower cost or differentiate its products from other regions, along with access to external factors which enhance business and operations / minimise risk (Stimson, Stough and Roberts, 2006).

8	Other Wood Product Manufacturing	51	-17.7%	3.63
9	Local Government Administration	173	18.9%	2.22
10	Road Freight Transport	150	20.0%	2.13

Source: ABS 2016 Census and Sensing Value analysis

Figure 9 charts LQs against employment growth for 2011–16 and clearly identifies a number of important sectors. In this analysis, key sectors fall into one of three categories:

Important sectors with employment growth greater than the state average

In assessing the LQ of the sectors in the region, a number of sectors were identified as important and growing and thus likely to be of regional specialisation (coloured blue in Figure 9). These sectors are major employers, as well as having a high LQ. These sectors most notably include the key sectors of Log Sawmilling and Timber Dressing, Forestry and Logging and Converted Paper Product Manufacturing. These sectors all have very high LQ values, reflecting a high degree of specialisation in forestry and wood product manufacturing for the region. Other key sectors that fall into this category include Electricity Supply, Road Transport, Local Government Administration and Accommodation.

Potentially emerging sectors

Emerging sectors are those whose LQs are lower than the state average, but whose employment growth nonetheless grew faster than the NSW state average over the period between 2011 and 2016 (coloured green in Figure 9). In the Snowy Valleys, the most notable emerging sector is the Other Social Assistance sector, which reflects the high proportion of retirees in the region. It would be expected that if this sector continues to grow, it could become a regional specialisation.

Important sectors with employment growth lower than the state average

There were also a number of key sectors that had high LQs, but whose employment grew by less than the overall state industry performance for that sector (coloured red in Figure 10). In the Snowy Valleys, this included the Fruit and Nut Growing sector which declined by 32.4% relative to the state average, as well as the smaller Dairy Cattle Farming and Wood Product Manufacturing sectors, although given the small employment totals for each of these sectors, this variability may due to small absolute changes in employment. Despite these decline, the high LQs of these sectors suggest they will continue to be important parts of the regional economy in the future.

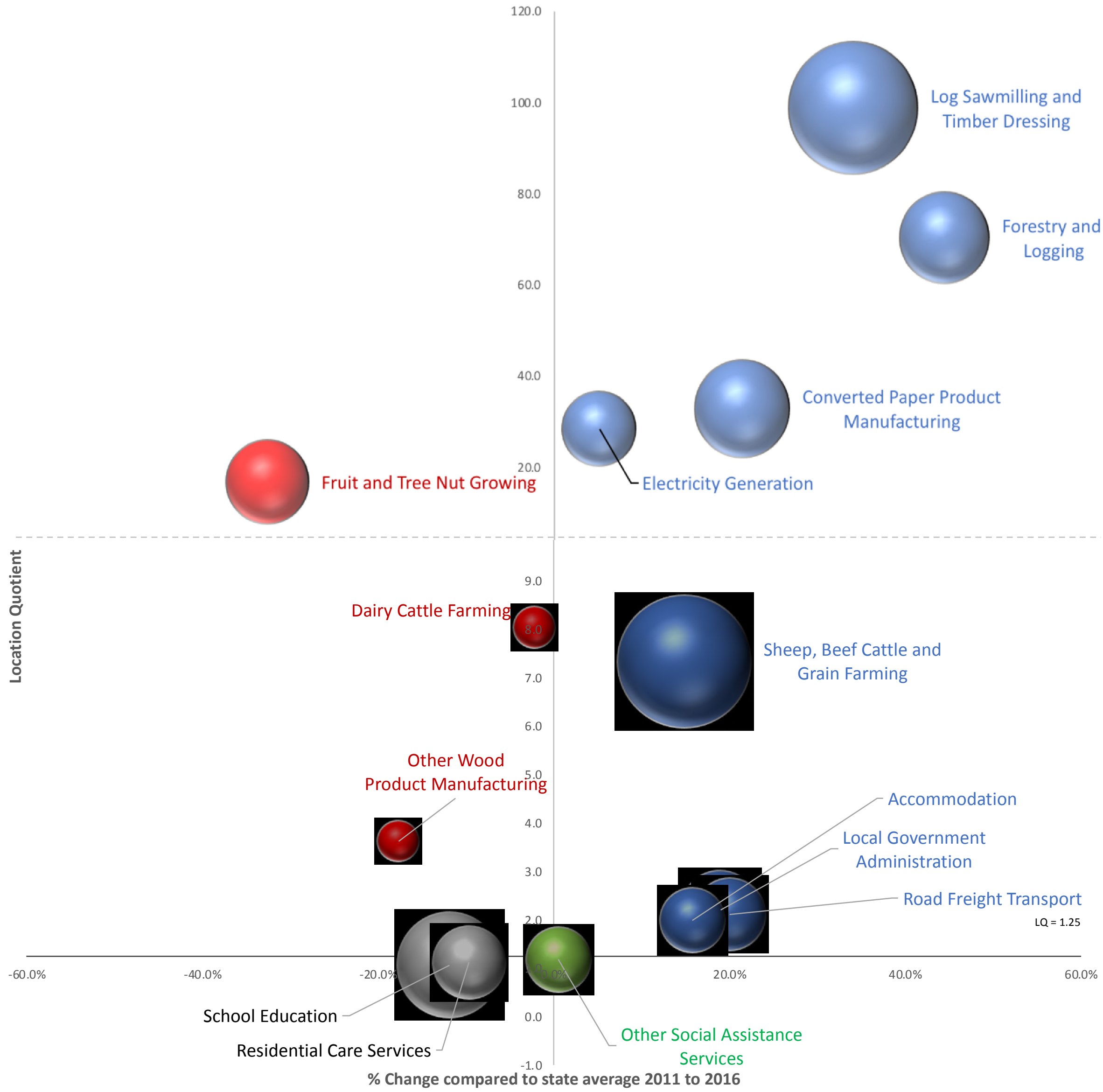
Figure 9 below charts selected industries in the regional economy in 2016:

- industries with a larger ‘bubble’ employed more people;
- industries further above the horizontal line are more specialised when compared to NSW (i.e. a LQ greater than 1.25[4]); and
- industries to the right of the vertical line grew faster between 2011 and 2016 than comparable industries across NSW, industries on the left grew more slowly

[4] A LQ of 1.25 is identified in the literature as denoting a specialisation.

Figure 9. Location Quotients and Employment Growth for Industries in Snowy Valleys

BLUE sectors are important sectors experiencing employment growth above the state average
GREEN sectors are potentially emerging sectors
RED sectors are important sectors experiencing employment growth below the state average
GREY sectors are supporting sectors which are unlikely to be areas of regional specialisation



Source: ABS 2016 Census and Sensing Value analysis

5.5. Core competencies

The Core Competencies Analysis (CCA) aims to identify the key competencies possessed by industries in the region, and the wider region as a whole, to identify potential capabilities and competencies that could act as a source of comparative advantage for the region. This is undertaken by the development of a Core Competencies Matrix which identifies a list of key competencies and scores each major sector on its ability to perform in these competencies. Each sector is scored from 1 to 5 on each of these competencies. This results in a matrix that can be aggregated across sectors to determine the *index of regional core competency* which describes how effective the region is at the regional core competency

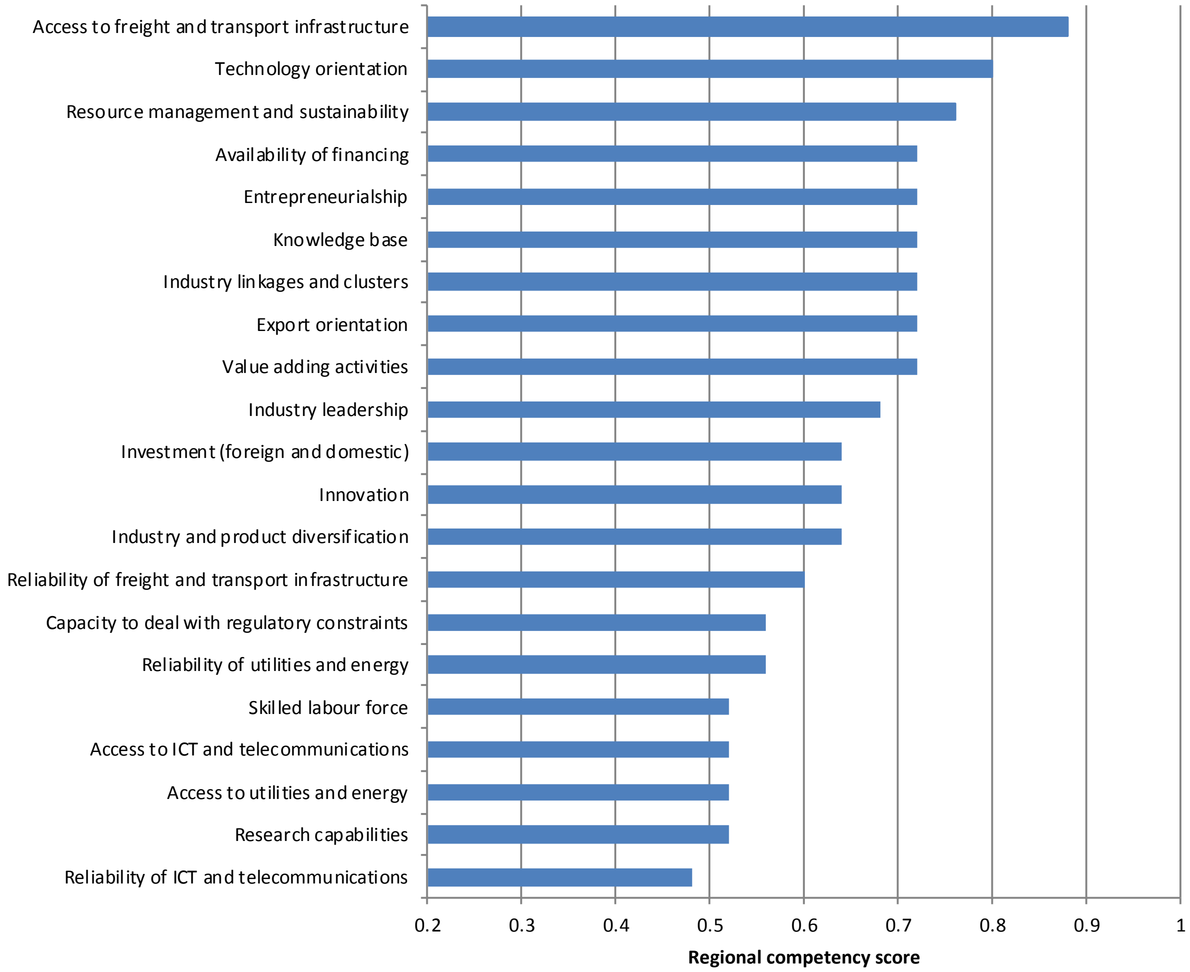
For the Snowy Valleys, the key industries on which the Core Competency Analysis was undertaken for include the following:

- Manufacturing
- Agriculture
- Health Care and Social Assistance
- Forestry and Logging
- Tourism.

The Core Competencies Matrix for the Snowy Valleys is summarised in Appendix B.

The index of regional core competency for the Snowy Valleys is summarised in Figure 10 on the following page.

Figure 10: Index of regional core competencies for the Snowy Valleys



The CCA for the Snowy Valleys suggests that the region has significant competency in access to reliable freight and transport infrastructure, a technology orientation in its key sectors and effective resource management of its value-driving assets. However, consistent with findings from the Regional Risk Analysis, the region suffers from issues in sourcing the required skilled workforce (due to the lack of a major educational institution in the region) and issues with the reliability of telecommunications throughout the region present ongoing issues. The cost and reliability of energy is also an area where the region lacks a competitive edge, although this is an issue that is facing most regional areas in Australia.

5.6. Regional risks

The Regional Risk Analysis (RRA) aims to identify exogenous and endogenous risks facing the key industries in the region, and subsequently the risks facing the region as a whole. The risks identified are classified into five broad risk categories:

- Economic Risk – impact of global markets, trade factors, inflation, transportation disruptions
- Production Risks – relates to access to resources, profits, production costs, changes in energy prices, labour disruptions
- Governance Risks – relates to sovereign risk (not just domestic), regulatory environment
- Environmental Risks – relates to resource depletion, pollution, natural and /or man-made disasters
- Societal Risks – relates to public liability claims against business, community attitudes toward development and pressure groups

Risks identified in these categories are then assessed on the following:

- Risk Impact – measure of the perceived impact that different risks may have on sectors of an economy should the event occur
- Risk Possibility – an assessment of the likelihood of the event occurring
- Anticipated Risk – measure of the combination of the risk's impact and likelihood.

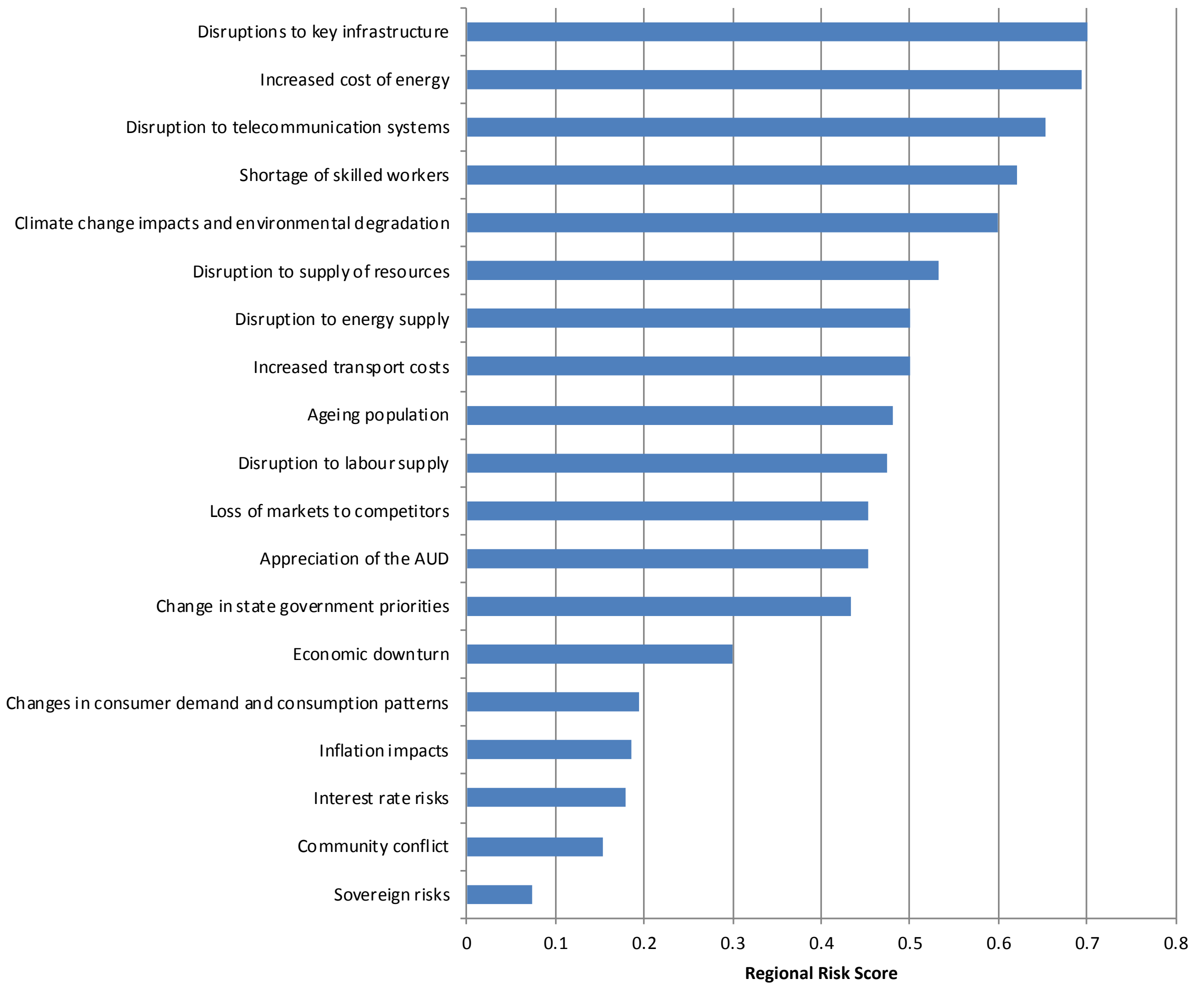
To undertake the RRA, a separate Risk Analysis was undertaken for each of the major industries in the region and aggregated to produce a *Regional Risk Index* is for the Snowy Valleys. The key industries on which Risk Analyses were undertaken include the following:

- Manufacturing
- Agriculture
- Health Care and Social Assistance
- Forestry and Logging
- Tourism.

Each of the individual risk analyses for these sectors can be found in Appendix C.

By aggregating the total risk scores of each the key sectors, we are able to develop an overall level of assessment of risk across the Snowy Valleys across each of the identified risks. This is summarised in Figure 11 below.

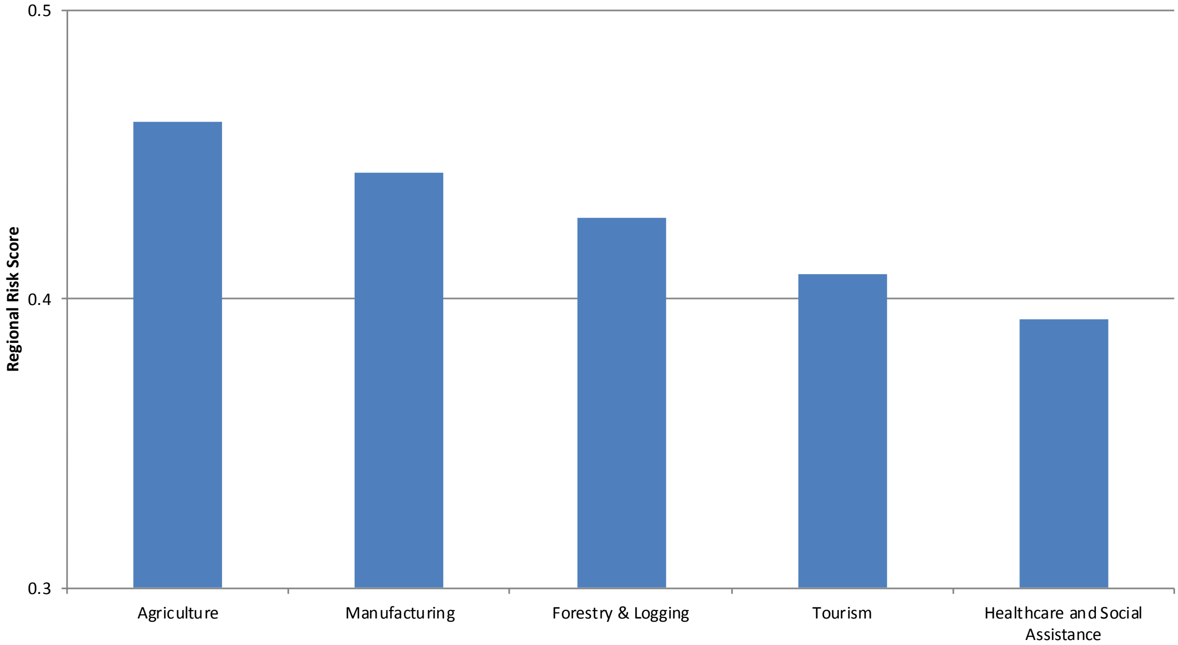
Figure 11: Regional Risk Index for the Snowy Valleys



The major risks facing the region relate to concerns regarding the increasing cost of energy, ensuring the sustainability of skilled workers and potential disruptions to key infrastructure and telecommunications that could disrupt operations at major manufacturers and processors. Telecommunications, including issues around the speed and reliability of both fixed and wireless internet was also a major issue for the general populace in the region. Some sectors, such as agriculture and tourism, also face issues with competition from other regions and countries in their markets.

An analysis of risk by industry in the region can also be undertaken by aggregating the total risks scores across each industry sector (see Figure 12 below).

Figure 12: Regional Industry Risk Index for the Snowy Valleys



Based on the assessment of the Regional Industry Risk Index, it appears the Agriculture and Manufacturing sectors face the highest levels of risk. Agriculture faces a number of risks relating to potential impacts from disruptions to infrastructure telecommunications, climate change impacts and competition from other regions which could impact the sector's competitiveness in the market. Both the Forestry and Logging and Manufacturing (Meat Processing and Wood Product Manufacturing) sectors faces similar risks in relation to reliability of energy costs and telecommunications, but also faces a number of risks relating to road transport costs and reliability.

While the Health Care and Social Assistance sector ranks as a relatively lower risk sector compared to some of the other sectors in the region, this reflects the relatively constant demand for social assistance services in the region, combined with its role as a supporting sector rather than an absolute driver of economic activity in the region. Tourism is also faces fewer risks compared to the larger sectors in the region as a result of its more diversified and less resource intensive activities.

6. Key strategies for developing and growing the Snowy Valleys economy

The Strategy for the region builds upon the opportunities presented by its endowments and specialisations, and also aims to address some of the key risks identified in the region. For the Snowy Valleys, sectors of regional specialisation were identified on the following basis:

- Sectors which had significant impacts on regional employment, value-add and exports
- Sectors which had high location quotient scores (i.e. LQ > 1.25)
- A higher proportion of the sector's growth was driven by regional factors
- Sectors which scored highly in the core competencies analysis
- The presence of major infrastructure or institutions in the region that can act as sources of comparative advantage.

Based on these factors, the regional specialisations (and the reasons for their classification as such) in the Snowy Valleys were determined to be the following:

- Manufacturing (Wood Product Manufacturing, Paper and Pulp Product Manufacturing and Meat Product Manufacturing)
- Forestry and Logging
- Agriculture
- Tourism.

These regional specialisations represent the existing economic strengths of the region although it should be noted that a successful economic strategy has to take into account more than investment into these sectors. For example, growth in these sectors will have to be supported by continuing to grow the skilled workforce in the region, and investment into enabling telecommunications and energy infrastructure across the region.

This is articulated in the vision for the Snowy Valleys:

"The Snowy Valleys will leverage its endowments building on its economic strengths and specialisations to grow the agriculture, forestry, timber product processing and tourism sectors and improve the liveability of the region to attract new residents and businesses."

This vision is actioned via the four elements of the Strategy. Each element is accompanied by a set of early actions, which should be interpreted simply as example actions derived from the preliminary application of the strategy framework. It is therefore expected that there will be other actions capable of contributing to the attainment of the region's vision that are yet to be identified. Consequently, an action's alignment with the Strategy is the primary strategic consideration, rather than it being listed in this document, and all proposed actions will be subject to further qualitative and quantitative evaluative processes.

6.1. Support and grow the Agriculture, Forestry and Timber Product Processing sectors

The Snowy Valleys region has a number of natural endowments that form the basis of the comparative advantage of its key sectors. The agricultural sectors in the region including livestock and fruit and tree nut farming enjoy access to significant fertile land endowment, temperate climate, and access and geographic co-location to food product manufacturing businesses in the region. In addition, the region has major forestry related resource endowments and timber product manufacturing facilities which are a major source of differentiation for the region's economy.

These natural endowments sectors will be the key drivers of the region's economy, particularly in generating value of output and growing exports. The operation and performance of those drivers need to be underpinned by a strong infrastructure in the region providing a pathway to market for the sector and offers the ability to support the agriculture, forestry and timber product processing sectors both in the expansion of current activities as well as supporting the pursuit of new opportunities and ventures. However, many of these sectors are constrained by issues with access to and reliability of infrastructure to enhance their productivity and opportunities to grow.

Potential benefits of the strategy – Support and grow the Agriculture, Forestry and Timber Product Processing sectors

- Growth of regional industrial capacity will allow for expansion of the region's wood product processing sector, which will in turn drive increased demand for the region's forestry products
- Improved access to market can reduce transport costs and improve the competitiveness of primary industry producers in the region
- Increased wood product processing capability will improve the export capabilities of the region.

Table 13: Priority projects for Strategy – "Support and grow the Agriculture, Forestry and Wood Product Processing sectors"

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Tumut Industrial Estate	Investment in enabling infrastructure for proposed new industrial estate in Tumut	Identified through the engagement process for the development of the Snowy Valleys Council Economic Development Strategy. It was reported that many industrial businesses, particularly in the timber processing and meat product manufacturing sectors, are at capacity on existing sites and have limited options elsewhere in the region.	This project will provide a dedicated large acreage industrial land available in the Tumut area, suitable for use by industrial businesses needing extensive operating areas. Works required include: ▪ Earthworks ▪ Infrastructure delivery: water, sewerage, gas, electricity ▪ Telecommunications including NBN and other high-speed connection technology.	Preparation of an Expression of Interest and Business Case for funding application under 'Growing Local Economies' program	Snowy Valleys Council

6.2. Continue to develop and grow the Tourism sector

The diversity of the natural environment and experiences on offer in the Snowy Valleys is currently the primary driver of visitation to the region. Parts of the region are located within the larger Australian Alps region and Snowy Valleys acts as a Western gateway to the Australian Alps including Mount Kosciuszko National Park and ski fields at Thredbo, Selwyn and Perisher Valley.

Whilst many of the tourism products and experiences across the region have close links to the Australian Alps, the recently released Riverina Murray Destination Management Plan identified that the development of supporting infrastructure and products within the region has been limited. These will need to be expanded to fully capitalise on the region's natural attractions, as well as support across the sector to drive the development of complementary tourism products built around food, wine and culture.

Potential benefits of Strategy – Continue to develop and grow the Tourism sector

- Increased tourism visitation creates demand for service jobs in hospitality, accommodation and entertainment that diversify employment in the region
- Development of a range of tourism products can help attract a range of different types of visitors to the region, which increases its breadth of appeal
- Increased visitation may lead to more people deciding to migrate into the region

Table 14: Priority projects for Strategy – “Continue to develop and grow the Tourism sector”

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Brindabella Road Upgrade	Upgrade and sealing of the Brindabella Road from Canberra to Tumut to establish a new touring route	Identified as a Tier 1 Priority Project in the Riverina-Murray Destination Management Plan	Upgrading and sealing Brindabella Road would be a game changer for the Snowy Valleys region, providing a shorter and more desirable touring route from Canberra through to Tumut. The scenic route will be popular for car clubs and also provide a more direct route to access the broader Riverina Region. There have been numerous studies undertaken in the past, however a thorough business case which explores the actual economic and tourism benefits of the road is required to progress this development.	▪ Award tender for survey and design of Brindabella Road upgrade ▪ Develop business case ▪ Lobby at a political level for upgrade	Snowy Valleys Council/RMS
Batlow Cidery Experience	Development of a Cidery and associated experiences at Batlow	Identified as a Tier 1 Priority Project in the Riverina-Murray Destination Management Plan	The former Mountain Maid cannery building in Batlow presents an opportunity to create a food and beverage experience with a strong link to the local produce history of the region. Development of a cidery with associated tasting and food experiences would be ideal given the prominence of Batlow as an apple producing region	▪ Call for Expressions of Interest from private investors ▪ Liaise with Department of Premier & Cabinet re: lodging a funding application under ‘Growing Local Economies’	Snowy Valleys Council/Private investors
Hume and Hovell MTB and Adventure	Development of a mountain bike track and adventure trail on the	Identified as a Tier 1 Priority Project in the Riverina-Murray Destination	Leveraging from the existing knowledge and popularity of the Hume and Hovell track provides a	Finalisation of the Mountain Bike Masterplan	Snowy Valleys Council/Destination Riverina Murray

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Trail	Hume and Hovell Track	Management Plan	unique opportunity for the Snowy Valleys region. A Mountain Bike Masterplan for the track is currently underway and will require funding for implementation.	currently being prepared by external consultants	

6.3. Enhance the liveability of the Snowy Valleys

The Snowy Valleys region has a gap in the number of working aged individuals between the ages of 25 – 49. This is compounded by the fact that the region population has a lower than average rate of post-school qualifications, which makes it difficult for many businesses to address their skills gaps or grow their business. Moreover, as the region continues to grow its aging population, there will be an increased demand for the range and sophistication of healthcare and social assistance services that will require more skilled workers.

Projects aimed at improving the attractiveness of the region as a migrant destination for skilled workers as well as efforts to cultivate leadership and sustainable growth in the healthcare sector will both become increasingly important into the future. This will become increasingly important as the region's population grows with the rollout of Snowy 2.0.

Potential benefits of Strategy – Support the expansion and growth of the Health Care and Social Assistance sector

- Expansion of the region's health services would increase the appeal of the region as a new resident destination for those who wish to be close to advanced health care services
- Growth in the sector creates demand for high-skilled jobs that can bring in and retain skilled workers into the regional workforce, as well as provide jobs for their partners.

Table 15: Priority projects for the Strategy – "Enhance the liveability of the Snowy Valleys"

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Multipurpose Sports & Community Hub	Development of a multi-purpose sports and community centre in Tumut	Identified as part of community consultation to address the limited space and popularity of sports such as Basketball and Netball within the Tumut township and surrounds	This project will provide a dedicated multipurpose sports and culture centre incorporating: ▪ basketball and netball courts ▪ gymnasium ▪ administrative facilities ▪ outdoor courts ▪ car parking	Development of a feasibility study for a Multi-Sports Centre at Tumut	Snowy Valleys Council
Centre of Excellence for Education and Business	Establishment of a Country Universities Centre integrated with a business hub	Identified through the engagement process for the development of the Snowy Valleys Council Economic Development Strategy Attraction and retention of skilled employees is a challenge for the region Initiatives aimed at improving the innovation and training capabilities of the region	The region has limited higher education opportunities and minimal infrastructure to support research and innovation. This results in the loss of young working-age people from the region. Access to a wider range of tertiary education courses, through university centres, and other skill development opportunities, through regional innovation hubs, will help to attract and retain young people to the region and grow local economic development opportunities and incomes. The Country Universities Centre presents an opportunity to support the economic development of the Snowy Valleys Council area. Alternative models could be explored, such as coupling the Centre with business hub and shared office space / incubator facilities linked to local industry.	Development of concept plan and engagement with key education and industry stakeholders	Snowy Valleys Council

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Tumut Hospital	Completion of the proposed new Tumut Hospital	Provides a service to improve liveability of the region, supporting an increased population as a result of Snowy 2.0	Currently, any major health services in the region require residents in the region to drive over one hour to Wagga Wagga. The replacement of the 117-year-old Tumut Hospital with a modern and well-equipped facility will significantly improve the quality of life of current and new residents in the region. This is particularly pertinent as population growth is expected to increase significantly as a result of major works relating to Snowy Hydro 2.0.	Development of stakeholder engagement to promote expedition of project	NSW Government

6.4. Improve utilities, energy and telecommunications throughout the region

Ensuring access and reliability of infrastructure, utilities, telecommunications and energy were identified as major risks for the region to grow and take up identified economic growth opportunities (such as Snowy 2.0).

The availability of residential land and affordable rental accommodation was identified as part of the community consultation as adversely impacting the capacity of business in the region to attract and retain workers. This suggests that potential strategic projects that can enhance infrastructure across the region and improvements to utilities, telecommunications and energy networks could have wide-ranging effects for improving the competitiveness of businesses in the region. Improved telecommunications and access to energy could also improve the region's appeal as a potential destination for residents and business.

Potential benefits of Strategy – "Improve utilities, energy and telecommunications throughout the region"

- Unlock and activate industrial land across the region
- Improves the operational efficiency of businesses in the region by removing barriers to expansion and day-to-day operations which can encourage businesses to set up in the region
- Improves quality of life for residents by improving town planning and providing improved telecommunications and access throughout the region.

Table 18: Priority Actions for the strategy - "Improve utilities, energy and telecommunications throughout the region"

Strategic Priority	Description	Alignment with Comparative Advantages	Project details	Priority actions	Stakeholders responsible for delivery
Tumbarumba electricity supply upgrade	Upgrade of the electricity distribution infrastructure supplying Tumbarumba	Identified through the engagement process for the development of the Snowy Valleys Council Economic Development Strategy. The current feeder line into Tumbarumba is hampered by regular unscheduled power outages	Council is seeking funding to prioritise the upgrade of the electricity distribution network infrastructure	Engagement with Essential Energy to establish process and approval requirements	Essential Energy
Improved telecommunications across the region	Investment in tele-communications infrastructure to address issues in the region	Identified through the engagement process for the development of the Snowy Valleys Council Economic Development Strategy Improved tele-communications will assist sectors such as agriculture, health, and tourism implement smarter technologies to drive efficiencies and growth	The poor quality of telecommunications in the region is a key barrier to economic growth and development, across all sectors. With the roll-out of the NBN, the region will become a more informed, connected, digitally active region with thriving on-line businesses and digitally improved medical and education sectors.	Continue the roll-out of NBN services Strategically addressing mobile black spots throughout the region Explore options with a service to provide WiFi in town centres across the region	Snowy Valleys Council, NBN Co and NSW Government

Appendix A. Location Quotients and Shift-share Analysis – Methodology

A.1. Location Quotients

The Location Quotient (LQ) is a ratio that compares the size of an industry within a region to the size of that industry within a larger geographical area, such as the state or the whole nation (reference region).

LQs are used to measure the relative importance of an industry or sector within a region compared with the reference region, with the LQ ratio usually applied to industry employment. However, LQ comparison may also be used to compare other economic factors including earnings, output (GDP), number of firms, occupations, job skills and demographics.

The LQ (applied to employment) is:

$$LQ^R = \left[\frac{E_i^R \, / \, E^R}{E_i^N \, / \, E^N}\right]$$

Where E_i^R and E^R are employment in the sector *i* in region R, and total employment in region R, respectively, and E_i^N and E^N are the total/national employment in the sector *i* and in the nation as a whole.

$$LQ = \frac{(\text{Regional Industry Employment / Regional Total Employment})}{(\text{National Industry Employment / National Total Employment})}$$

The accepted rule for the LQ is that where:

LQ > 1.0 proportionally more workers are employed in an industry sector compared with the larger comparison area. It can be implied that there is some specialisation in the sector in the region; there may be surplus production / services available for export; and the region may have a comparative advantage in that sector.

LQ = 1.0 the industry sector produces just enough to satisfy the region's demand for its products / services.

LQ < 1.0 the industry sector is less specialised compared with the larger area, and may need to import products / services from the sector in other regions.

Generally, LQs >1.25 are taken as initial evidence of regional specialisation and the industry sector has potential to be classified as an exporter.

A.2. Shift-Share Analysis

Shift-share analysis is a method used to identify potential sources of regional economic change. The analysis separates the regional changes within each industry into three different components:

1. ***National (or State) growth effect*** is the portion of the change attributed to the national economy, or NS in this analysis. It equals the change in the regional variable if had it increased by the same percentage as the national (state) economy.
2. ***Industry mix effect*** is the portion of the change attributed to the performance of the specific industry. It equals the change in the regional variable if had it increased by the same percentage as the national industry, minus the national increase effect.
3. ***Local share effect*** is the portion of the change attributed to regional influences. It equals the actual change in the regional variable, minus the National growth and Industry mix effects. It is the key component of interest in the analysis.

Using the example of employment E in industry *i* in region *r*: (E*ir*). The change in E*i* between the two reference years *t* and *t+n* is defined as the sum of the three shift-share components, National growth effect (NS_i), Industry mix effect (IM_i) and Local share effect (LS_i).

$$E_{ir}^{t+n} - E_{ir}^{t} = NS_i + IM_i + LS_i$$

The beginning and ending values of employment in the industry are E_{ir}^{t} and E_{ir}^{t+n}, respectively. Each of the three effects is defined as a percentage of the beginning value of the industry employment:

NSi $= E_{ir}^{t} * G_n$

IMi $= E_{ir}^{t} * (G_{in} - G_n)$

LSi $= E_{ir}^{t} * (G_{ir} - G_{in})$

Where:

E_{ir}^{t} = number of jobs in industry i in region r at the beginning of the time period.

Gn = growth rate for total employment nationally over the time period ($\frac{Total\ jobs_n^{t+1}}{Total\ jobs_n^{t}}$).

Gin = growth rate in industry i nationally over the period ($\frac{Total\ industry\ jobs_{in}^{t+1}}{Total\ industry\ jobs_{in}^{t}}$).

Gir = growth rate in industry i in region r over the time period ($\frac{Region\ industry\ jobs_{ir}^{t+1}}{Region\ industry\ jobs_{ir}^{t}}$).

Appendix B. Core competencies analysis - matrix

The Core competency analysis (CCA) aims to identify the key competencies posessed by industries in the region, and the wider region as a whole, to identify potential capabilities and competencies that could act as a source of comparative advantage for the region. This is undertaken by the development of a Core Competencies Matrix which identifies a list of key competencies and scores each major sector on its ability to perform in these competencies. Each sector is scored from 1 to 5 on each of these competencies. This results in a matrix that can be aggregated in two ways:

- Scores can be aggregated across sectors to determine the *index of regional core competency* which describes how effective the region is at the regional core competency
- Scores can be aggregated down sectors to determine the *index of industry sector performance* which provides an overall indication as to the performance of a given sector in the region.

For the Snowy Valleys, the key industries on which the Core Competency Analysis was undertaken for include the following:

- Manufacturing
- Agriculture
- Forestry and Logging
- Health Care and Social Assistance
- Tourism.

Figure B.1: Core Competency Matrix for the Snowy Valleys

COMPETENCY	Manufacturing	Agriculture	Healthcare and social assistance	Forestry & Logging	Tourism	TOTAL	Potential maximum	Index of regional core competency
Access to freight and transport infrastructure	5	5	4	4	4	22	25	0.88
Reliability of freight and transport infrastructure	3	3	3	3	3	15	25	0.60
Availability of financing	4	4	3	4	3	18	25	0.72
Investment (foreign and domestic)	4	3	3	3	3	16	25	0.64
Skilled labour force	3	3	2	3	2	13	25	0.52
Innovation	5	3	2	3	3	16	25	0.64
Entrepreneurialship	4	4	3	4	3	18	25	0.72
Industry linkages and clusters	5	4	2	5	2	18	25	0.72
Capacity to deal with regulatory constraints	3	3	2	3	3	14	25	0.56
Access to ICT and telecommunications	4	2	2	3	2	13	25	0.52
Reliability of ICT and telecommunications	3	2	3	2	2	12	25	0.48
Access to utilities and energy	2	2	3	3	3	13	25	0.52
Reliability of utilities and energy	3	2	3	3	3	14	25	0.56
Value adding activities	5	4	3	4	2	18	25	0.72
Research capabilities	4	3	2	3	1	13	25	0.52
Knowledge base	5	4	2	5	2	18	25	0.72
Industry leadership	5	3	2	5	2	17	25	0.68
Export orientation	5	3	2	5	3	18	25	0.72
Industry and product diversification	5	3	2	4	2	16	25	0.64
Resource management and sustainability	4	4	3	5	3	19	25	0.76
Technology orientation	5	4	3	5	3	20	25	0.80
TOTAL	86	68	54	79	54			
Potential maximum	105	105	105	105	105			
Index of industry sector performance	0.82	0.65	0.51	0.75	0.51			

5 = Highly competent (regional advantage)
1 = Lacking competence (not a regional advantage)

Appendix C. Regional risk analysis – Industry breakdown

The Regional Risk Analysis (RRA) aims to identify exogenous and endogenous risks facing the key industries in the region, and subsequently the risks facing the region as a whole. The risks identified are classified into five broad risk categories:

- Economic Risk – impact of global markets, trade factors, inflation, transportation disruptions
- Production Risks – relates to access to resources, profits, production costs, changes in energy prices, labour disruptions
- Governance Risks – relates to sovereign risk (not just domestic), regulatory environment
- Environmental Risks – relates to resource depletion, pollution, natural and / or man-made disasters
- Societal Risks – relates to public liability claims against business, community attitudes toward development and pressure groups

Risks identified in these categories are then assessed on the following:

- Risk Impact – measure of the perceived impact that different risks may have on sectors of an economy should the event occur
- Risk Probability – an assessment of the likelihood of the event occurring
- Anticipated Risk – measure of the combination of the risk's impact and likelihood.

To undertake the Regional Risk Analysis, a separate Risk Analysis was undertaken for each of the major industries in the region and aggregated to produce a whole of region Risk Analysis. For the Snowy Valleys, the key industries on which Risk Analyses were undertaken include the following:

- Manufacturing
- Agriculture
- Forestry and Logging
- Health Care and Social Assistance
- Tourism.

For each of these sectors, a ranking system was developed based on the risk matrix in Figure C.1 below.

Figure B.1: Risk matrix for undertaking Regional Risk Analysis

			IMPACT				
			1	2	3	4	5
			Insignificant	Weak	Moderate	Strong	Very strong
LIKELIHOOD	6	Almost certain	Low Med	Medium	Medium High	High	High
	5	Likely	Low Med	Medium	Medium High	High	High
	4	Possible	Low	Low Med	Medium	Medium High	High
	3	Unlikely	Low	Low Med	Medium	Medium High	Medium High
	2	Very Unlikely	Low	Low Med	Low Med	Medium	Medium High
	1	Extremely Unlikely	Low	Low	Low Med	Medium	Medium

The Risk Analysis for each of these sectors is attached in the following section.

Manufacturing

The Manufacturing sector in the Snowy Valleys is primarily driven by the wood product manufacturing, paper and pulp product manufacturing and food product manufacturing sectors. Each of these are major value-add sectors in the region, but their industrial nature exposes them to a range of risks around the costs of inputs, most notably the cost of energy and transport costs, as well as a shortage of skilled workers to draw from. Disruptions to telecommunications and energy also represent major risks that can disrupt the major operations of these sectors.

Figure C.2: Risk Analysis for the Manufacturing sector

Risk	Classification	Likelihood	Impact	TOTAL
Increased cost of energy	Production	4	5	High
Disruption to telecommunication systems	Production	5	4	High
Disruptions to key infrastructure	Economic, production	4	5	High
Appreciation of the AUD	Economic	4	5	High
Loss of markets to competitors	Economic	4	5	High
Shortage of skilled workers	Economic, production	4	4	Med High
Disruption to energy supply	Production	4	4	Med High
Change in state government priorities	Governance	4	4	Med High
Disruption to supply of resources	Production	4	4	Med High
Increased transport costs	Economic, production	3	5	Med High
Climate change impacts and environmental degradation	Environmental	5	3	Med High
Ageing population	Economic, societal	5	3	Med High
Disruption to labour supply	Production	3	4	Med High
Economic downturn	Economic	4	3	Medium
Interest rate risks	Economic, production, societal	3	2	Low Med
Inflation impacts	Economic	2	3	Low Med
Changes in consumer demand and consumption patterns	Production	2	2	Low Med
Community conflict	Societal	2	1	Low
Sovereign risks	Economic, governance	1	2	Low

Agriculture

The Agriculture sector faces a number of risks relating to issues around increasing costs of energy, transport (as a result of issues relating to freight roads) and issues relating to the workforce, both in terms of an aging workforce and a shortage of skilled labourers. This is currently being exacerbated by an undersupply of accommodation options that constrains the sector’s ability to bring in appropriately skilled workers. Climate change impacts and telecommunication issues are also increasingly prevalent risks that could potentially affect the future outlook of the sector.

Figure C.4: Risk Analysis for the Agriculture sector

Risk	Classification	Likelihood	Impact	TOTAL
Climate change impacts and environmental degradation	Environmental	5	5	High
Disruption to telecommunication systems	Production	5	5	High
Increased cost of energy	Production	5	4	High
Shortage of skilled workers	Economic, production	4	5	High
Disruptions to key infrastructure	Economic, production	5	4	High
Loss of markets to competitors	Economic	4	5	High
Appreciation of the AUD	Economic	4	5	High
Ageing population	Economic, societal	5	4	High
Disruption to supply of resources	Production	4	4	Med High
Increased transport costs	Economic, production	3	4	Med High
Disruption to labour supply	Production	3	4	Med High
Change in state government priorities	Governance	3	4	Med High
Economic downturn	Economic	4	3	Medium
Disruption to energy supply	Production	3	3	Medium
Interest rate risks	Economic, production, societal	3	2	Low Med
Changes in consumer demand and consumption patterns	Production	2	2	Low Med
Inflation impacts	Economic	2	2	Low Med
Community conflict	Societal	2	2	Low Med
Sovereign risks	Economic, governance	1	2	Low

Forestry and Logging

The Forestry and Logging sector in the Snowy Valleys faces its major risks in the form environmental and climate change impacts and potential disruptions to infrastructure and resources. As with all sectors in the region, there are increasing risks relating to the ability of the region to source appropriately skilled workers. The sector is also more vulnerable to wider macroeconomic factors, as many of the products in the sector are driven by export demand despite typically being processed within the region.

Figure C.5: Risk Analysis for the Forestry and Logging sector

Risk	Classification	Likelihood	Impact	TOTAL
Climate change impacts and environmental degradation	Environmental	5	5	High
Disruptions to key infrastructure	Economic, production	4	5	High
Disruption to supply of resources	Production	4	5	High
Change in state government priorities	Governance	4	5	High
Disruption to telecommunication systems	Production	4	4	Med High
Shortage of skilled workers	Economic, production	4	4	Med High
Disruption to labour supply	Production	4	4	Med High
Increased transport costs	Economic, production	4	4	Med High
Appreciation of the AUD	Economic	4	4	Med High
Loss of markets to competitors	Economic	4	4	Med High
Economic downturn	Economic	3	3	Medium
Community conflict	Societal	3	3	Medium
Changes in consumer demand and consumption patterns	Production	3	3	Medium
Disruption to energy supply	Production	3	3	Medium
Increased cost of energy	Production	5	2	Medium
Ageing population	Economic, societal	5	2	Medium
Sovereign risks	Economic, governance	1	2	Low
Interest rate risks	Economic, production, societal	3	1	Low
Inflation impacts	Economic	2	1	Low

Health Care and Social Assistance

The Health Care and Social Assistance sector faces a number of risks associated with the ability to consistently and reliably deliver an increasingly diverse range of services that are demanded by its customers. This includes costs associated with energy, transport and resources, as well as an inability to source more skilled workers and concerns regarding the reliability of telecommunications systems.

Figure C.6: Risk Analysis for the Health Care and Social Assistance sector

Risk	Classification	Likelihood	Impact	TOTAL
Shortage of skilled workers	Economic, governance	5	5	High
Increased cost of energy	Economic	6	4	High
Disruption to telecommunication systems	Production	4	5	High
Disruptions to key infrastructure	Economic, societal	5	4	High
Disruption to labour supply	Environmental	4	4	Med High
Disruption to energy supply	Economic, production	4	4	Med High
Ageing population	Production	5	3	Med High
Climate change impacts and environmental degradation	Production	5	3	Med High
Disruption to supply of resources	Production	3	4	Med High
Increased transport costs	Economic, production, societal	4	3	Medium
Changes in consumer demand and consumption patterns	Production	2	3	Low Med
Loss of markets to competitors	Economic	2	3	Low Med
Appreciation of the AUD	Economic, production	3	2	Low Med
Change in state government priorities	Economic	3	2	Low Med
Interest rate risks	Governance	3	2	Low Med
Economic downturn	Production	2	2	Low Med
Inflation impacts	Economic	2	2	Low Med
Sovereign risks	Societal	1	3	Low Med
Community conflict	Economic, production	2	1	Low

Tourism

Tourism in the Snowy Valleys is primarily driven by holiday visitation, driven both by the region's role as the gateway to the Mt. Kosciuszko National Park and its own natural asset offerings. Disruptions to key infrastructure and telecommunications are the major risks that may impact on the ability of people to enjoy their time in the region, and the ongoing presence of issues created by these risks may act as a deterrent for people to visit more frequently. While the appreciation of AUD is recognised as a potential risk, the majority of visitors to the Snowy Valleys are domestic visitors rather than international, and are less likely to be impacted by a stronger AUD.

Figure C.8: Risk Analysis for the Tourism sector

Risk	Classification	Likelihood	Impact	TOTAL
Disruption to key infrastructure	Economic, production	5	5	High
Increased cost of energy	Production	6	4	High
Disruption to telecommunication systems	Production	5	5	High
Increased transport costs	Economic, production	4	5	High
Shortage of skilled workers	Economic, production	4	4	Med High
Disruption to labour supply	Production	4	4	Med High
Disruption to energy supply	Production	3	5	Med High
Disruption to supply of resources	Production	3	4	Med High
Inflation impacts	Economic	3	4	Med High
Ageing population	Economic, societal	6	2	Medium
Climate change impacts and environmental degradation	Environmental, societal	5	2	Medium
Economic downturn	Economic	2	4	Medium
Change in state government priorities	Governance	4	2	Low Med
Changes in consumer demand and consumption patterns	Production	2	3	Low Med
Loss of markets to competitors	Economic	2	3	Low Med
Interest rate risks	Economic, production, societal	2	3	Low Med
Community conflict	Societal	3	2	Low Med
Appreciation of the AUD	Economic	4	1	Low
Sovereign risks	Economic, governance	1	2	Low

Appendix D. Stakeholder consultation process

This Regional Economic Development Strategy was prepared by each of the LGAs with the assistance of Sensing Value Economic Consulting. The consultation process undertaken for this project involved a number of workshops, as well as a series of 1-on-1 interviews with member councils, as well as a compilation of past and current stakeholder consultation processes undertaken as part of the development of strategic documents. These are detailed below.

Workshop 1

The first workshop sought to provide an overview of the REDS framework and present the initial analysis for the economic and demographic audits, the infrastructure, natural endowments audit and institutional audits for Council and stakeholder feedback and discussion. This also included a discussion of the key risks, issues and barriers facing the key sectors in the region as well as each sector's core competencies.

Workshop 2

The second workshop presented an updated and revised version of the findings in the REDS Analytical Report document, informed by discussions in Workshop 1 and findings from interviews held with a number of key stakeholders. These findings then formed the basis for discussing the potential economic opportunities that exist amongst the sectors in the region, and the alignment of these opportunities with the identified comparative advantages and key endowments of the region.

Workshop 3

The third workshop used the findings from the completed REDS Analytical Report and the findings from the first two Workshops to identify the key strategic priorities for the Snowy Valleys region.

Stakeholder consultation

The Snowy Valleys Council had previously undertaken stakeholder consultations as part of the development of its strategic documents. Many of the findings from these consultations included opinions and insights that fed into the development of the analysis for this report. These engagements are detailed in Table D.1 below

Table D.1 Snowy Valleys Council – Stakeholder engagement on Economic Development

Council Document	Timing	Engagement process and participation
Snowy Valleys Economic Development Strategy	January-March 2018	▪ Consultation Discussion and Information Paper released in late January 2018 ▪ Consultation meetings held over the course of February and March 2018 ▪ Consultation Findings Summary published in early April 2018
Snowy Valleys Community Strategic Plan - *Snowy Valleys 2028 – Our Vision Our Future*	November – December 2017	▪ Community Workshops conducted over the course of November and December 2017 ▪ Draft Community Engagement Report published in January 2018

Appendix E. Regional Profile

E.1. Key economic indicators for the Snowy Valleys

Table E.1: Summary statistics for the Snowy Valleys

Key statistic		Source
Population (2016)	14,395	ABS Census 2016
Gross Regional Product (2016)	$841 million	DPC Input-Output Model (2016)
Total employment (2016)	5,988	ABS Census 2016
Total labour force (2016)	6,331	ABS Census 2016
Value of exports (2015)	$203 million	DPC Input-Output Model (2016)
Major employing industries	Sheep, Beef Cattle and Grain Farming Log Sawmilling and Timber Dressing Converted Paper Product Manufacturing Forestry and Logging Electricity Generation Tourism	ABS 2016 Census

E.1.1. Dependency ratios

Snowy Valleys' demographics reflect a higher level of dependency, with both higher levels of aged and youth dependency compared when compared to NSW (as seen in Table E.2 below). As the FER continues its aging population, it is likely that these dependency ratios will become larger into the future.

Table E.2: Dependency ratios – Snowy Valleys compared with New South Wales (2016)

Ratios (%)	Snowy Valleys	New South Wales
Aged dependency ratio[5]	37.1	25.0
Youth dependency ratio[6]	30.2	28.4
Dependency ratio[7]	67.3	53.4

Source: ABS 2016 Census

E.1.2. Welfare dependency statistics

The Snowy Valleys also has a much higher proportion of welfare dependency compared to state averages – most notably, the proportion of individuals receiving the aged pension is 6.9 per cent cent higher than the state average (see Table E.3 below). This is consistent with the high aged dependency ratio seen in Table E.2.

Table E.3: Welfare dependency (population aged 15 years and over) – June 2016

	Snowy Valleys	New South Wales
Aged pension (%)	18.2	13.3
Disability support pension (%)	5.7	4.2
Newstart Allowance (%)	3.5	3.4

Source: Department of Social Services 2016

E.1.3. Employment

A review of employment numbers in the Snowy Valleys in Table E.4 below suggests employment in the region is highly services-driven, with education, retail, health care and public administration all amongst the largest employers in the region. Agriculture (mostly sheep, grains, beef and dairy cattle farming), Defence and Construction are the major non-service employers. Note that these figures are presented at the ANZSIC 2-digit level to provide a higher-level view of sectors in the region and so will differ in classification to the figures in the level of aggregation of the other tables in this section.

Table E.4: Major employers in the Snowy Valleys, 2016

ANZSIC sector (2-digit)		FTE
1	Agriculture	756
2	Wood Product Manufacturing	444

[5] The aged dependency ratio is defined as the ratio of people aged 65 and over to those between 15 and 64
[6] The youth dependency ratio is defined as the ratio of those under 15 to those between 15 and 64
[7] The dependency ratio is defined as the ratio of those under 15 and over 64 to those between 15 and 64

3	Preschool and School Education	352
4	Food and Beverage Services	284
5	Pulp, Paper and Converted Paper Product Manufacturing	268
6	Public Administration	237
7	Construction Services	221
8	Food Retailing	207
9	Other Store-Based Retailing	191
10	Forestry and Logging	183

Source: ABS 2016 Census

While they are not included in Table E.4 above, Road Transport, Social Assistance Services, Accommodation, Electricity Supply and Residential Care Services were also major employers in the region.

Geographically, some industries are concentrated around particular towns and a more granular analysis can reveal local areas with important sectoral links. The Statistical Area Level 2 (SA2) is a statistical grouping calculated by the ABS with each SA2 having a population between 3,000 and 25,000 persons, and an average population of about 10,000 persons. The major industries of employment in each SA2 in the Snowy Valleys are summarised in Table E.5 below.

Table E.5: Key employing industries by SA2, 2016 (minimum 100 people employed)

SA2 Region	Key employing industries (ANZSIC sector 3-digit)
Tumut	Log Sawmilling and Timber Dressing, School Education, Converted Paper Product Manufacturing, Forestry and Logging, Residential Care Services
Tumbarumba	Sheep, Beef and Dairy Cattle and Grain Farming, Log Sawmilling and Timber Dressing, Local Government Administration, School Education, Electricity Generation
Tumut Region	Sheep, Beef and Dairy Cattle and Grain Farming, Fruit and Tree Nut Growing, School Education, Electricity Generation, Converted Paper Product Manufacturing

Source: ABS 2016 Census

E.2. Existing Strategic Plans

Existing plans at a local, state and Federal level may play an important role in the development of the REDS. The current existing strategic plans in the Snowy Valleys include the following:

Snowy Valleys Council

- Snowy Valleys Economic Development Strategy – *Consultation Findings Summary March 2018*
- Snowy Valleys Community Strategic Plan - *Snowy Valleys 2028 – Our Vision Our Future*

Regional strategic documents

- Riverina Murray Regional Plan
- RDA Riverina Regional Plan 2016-2019
- Riverina Destination Management Plan 2013

Broader Government (State and Commonwealth) strategies

- Regional Development Framework
- The Destination 2036 Action Plan
- NSW 2021: A Plan to Make NSW Number One (the State Plan)
- Unlocking our Great Outdoors

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