

5.0 Regional NSW

Key points

NSW has the largest and most diversified regional economy of any State in Australia.

Over a third of the population (37 percent), live and work in the regions, contributing around a quarter of the State's economic output.

The development and future prosperity of Regional NSW and Metropolitan NSW, is firmly interlinked. Regional NSW supplies global markets and Sydney with produce, commodities and resources.

The continued development and support of regional infrastructure benefits the NSW economy as a whole and should not be looked at in isolation from metropolitan infrastructure. NSW road, aviation and rail networks provide Regional NSW with the connectivity vital for regional and State prosperity.

Over the last decade, Regional NSW has experienced a two-speed economy caused by increased demand for coal and minerals on one hand and pressure on other industries, particularly manufacturing, on the other. This raises challenges for the ability of infrastructure to service increased demand.

Infrastructure NSW has identified four infrastructure objectives for Regional NSW:

- improve access to employment and to connect people and communities
- improve local transport networks
- efficient access to markets, particularly mining and agriculture products to domestic and international markets
- improve water quality and security.

Low population densities and ageing demographics make infrastructure investments more challenging in some areas than others. To some extent, new service models enabled by technology will ensure regions can continue to receive quality services.

This section examines the economies and infrastructure challenges faced by Regional NSW and the specific challenges confronting individual regions including the Hunter and the Illawarra.

5.1 Introduction

NSW has the highest regional population and largest and most diversified regional economy of any State in Australia. Manufacturing is the largest industry in regional NSW (in terms of share of value add), followed by mining (which includes the coal industry and the emerging coal seam gas sector).

Regional cities are home to major hospitals and universities. Regional NSW has many areas of great natural beauty that appeal to domestic and international visitors as well as residents looking to migrate to regional areas.

The Deloitte Access Economics Report divides Regional NSW into five sub-regions for the purposes of the Strategy.

The composition of each sub-region is:

- Hunter – Upper and Lower Hunter
- South Coast – Illawarra, South East NSW and Southern Highlands and Southern Tablelands
- North Coast – Mid North Coast and Northern Rivers
- Inland NSW – Central West, Far West, Orana, New England and North West
- Murray – Murray-Lower Darling, Riverina.

The five sub-regions are based on differences in population (and population growth) and differences in industry structure in 2011. Figure 5.1 shows the predicted population growth from 2011–2031 and the forecast GRP growth. The coastal regions are expected to experience the highest growth in GRP per capita (of around 1.5 percent), while West of the Divide, the Murray and Inland NSW are expected to experience lower annual growth rates.

Regional NSW has experienced a two-speed economy. Mining and associated construction has dominated growth in the last decade while manufacturing has experienced pressure from the exchange rate and increased competition for capital and labour.

5.2 Regional NSW today

As described in Deloitte Access Economics Report¹:

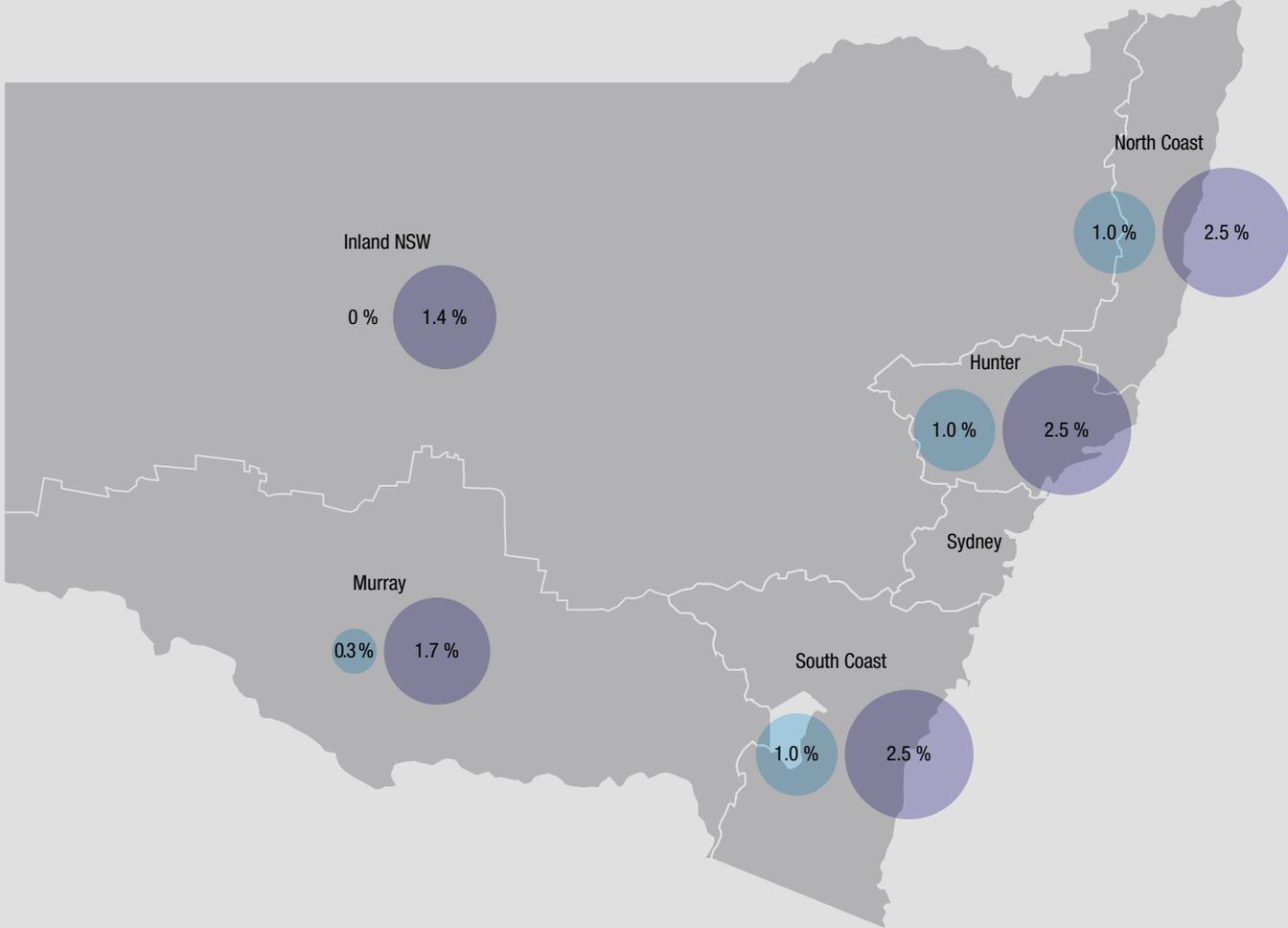
- 2.6 million people live in regional areas, which is more than a third (37 percent), of the NSW population;
- 36 percent of all NSW jobs (1.3 million in total), are in regional areas; and
- 25 percent of GSP (\$107 billion), is produced in regional NSW.

Sydney relies on Regional NSW to supply the produce, commodities and resources that enable it to compete with its global peers.

NSW's top export is coal, from the largest coal port in the world at Newcastle. The top five industries in Regional NSW are manufacturing, mining, agriculture, construction and health and social assistance.

¹ Deloitte Access Economics 2012, The NSW Economy in 2031-32, Report to Infrastructure NSW.

Figure 5.1 Population, Jobs and Economy of Regional NSW



● Population growth rate per annum
 ● GRP growth rate per annum

Source: Deloitte Access Economics.

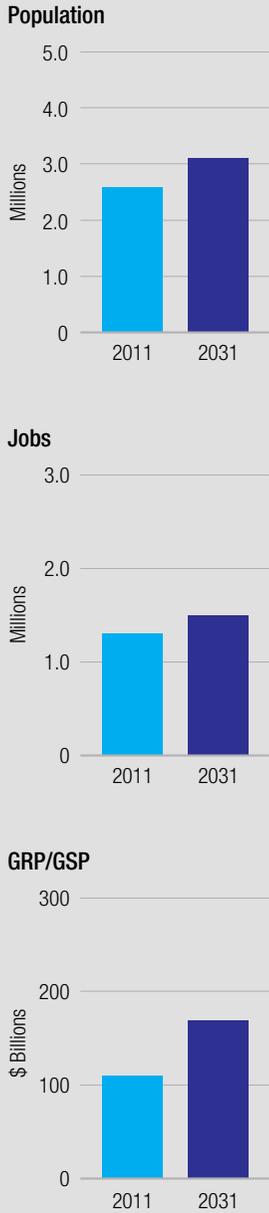
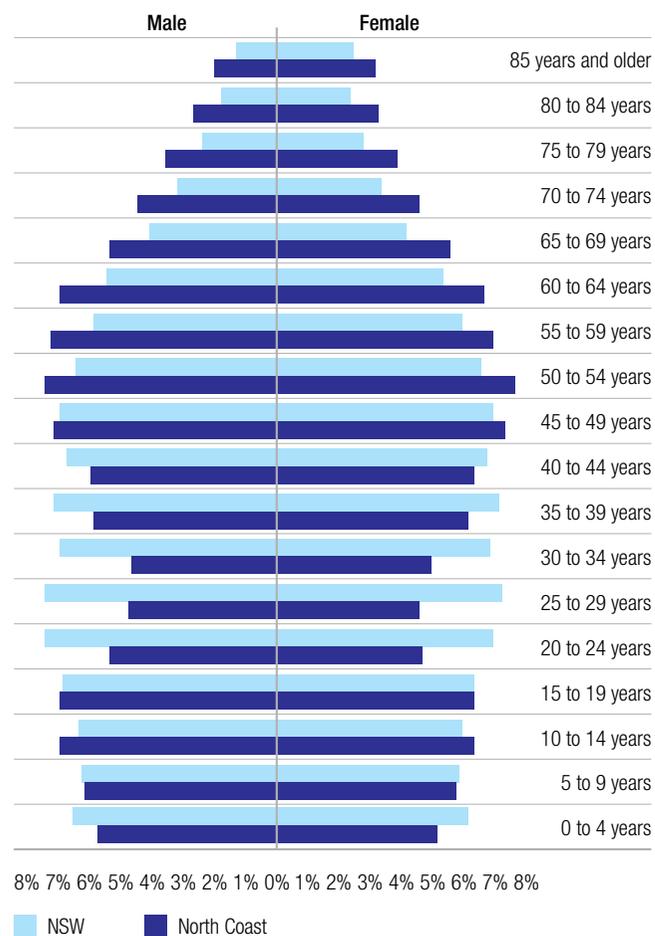


Figure 5.2 North Coast Regional Demographic profile compared to NSW profile



Source: Deloitte Access Economics.
 Note: Indicative Regional Demographic Profile (North Coast & NSW, 2010).

5.2.1 Demographic Profile

Analysis of the demographic profiles of a number of regions shows a relatively high dependency ratio (the ratio of people aged under 15 and over 65 to total population) of around 0.36 compared to 0.33 for Sydney. The proportion of the population from 20 to 40 years old is particularly low. This is partly the result of the past decade of drought when less labour was needed in agricultural production, encouraging migration away from some regional areas. The demographic profile of North Coast, shown in Figure 5.2, illustrates this 'missing' age group compared to profile of NSW as a whole.

The impact of a lower proportion in this age group is reflected in forecasts for school growth, which are substantially lower than in Sydney. The profile above also illustrates the higher proportion in the 'over 50' age group.

5.2.2 Employment in Regional NSW

Creating and then sustaining employment opportunities is a critical issue for Regional NSW. A lack of employment opportunities has led to the need for people to leave the regional areas for work elsewhere.

Employment challenges vary considerably between the different regions in NSW.

Some regions are experiencing employment growth due in part to the expansion of mining activity. Regional centres such as Dubbo, Orange and Broken Hill and towns in the Hunter are experiencing housing shortages and affordability problems and low unemployment rates due to the rapid growth of the mining sector.

Table 5.1 Labour Market Statistics by Region

Region	Employment	Unemployment Ratio
Hunter	323,400	3.5%
Illawarra and South Coast	364,300	7.1% Illawarra 3.8% South Coast
North Coast	242,700	5.6%
Inland NSW	245,000	5.8%
Murray Riverina	138,700	5.1%

Source: Deloitte Access Economics.

Other regions are undergoing significant structural change. The Illawarra has the highest unemployment rate of any region in NSW reflecting the recent decline of Wollongong's manufacturing base.

To a large extent, the creation of employment opportunities and economic diversity is achieved through investment of the private sector, but this needs to be supported by good planning, efficient approvals and timely investment in infrastructure. Infrastructure NSW supports the NSW Government's recommendations in the Green Paper, *A New Planning System for NSW* (July 2012) to establish a regional approach to the release of land for industrial and residential development purposes.

Infrastructure NSW also notes that technology, mobility and patterns of work are changing and new ways of working are able to increase access to jobs from regional areas. For example, Bowral and Moss Vale have 11 per cent and 10 percent of their workforce who tele-work from home².

² KPMG presentation to Infrastructure NSW.

Every day people commute out from Newcastle to coal mines in the Hunter Valley and people in Regional NSW travel from regional airports to 'fly-in, fly-out' jobs in the mining states of Queensland and Western Australia.

The Illawarra and Lower Hunter regions are increasingly becoming integrated with the economy of the Greater Sydney region. Many residents commute by rail and many more make the journey by road to work in Sydney every day. As Newcastle and Wollongong grow in size and importance to the NSW economy, they need faster and more efficient links to Sydney³. In Section 8, Infrastructure NSW assesses how faster rail journeys from the Illawarra and Central Coast to Sydney would help enable this integration and support these regions.

'Fly-In, Fly-Out' Employment

NSW is both a supplier of skilled labour to interstate (Queensland and Western Australian) and international mines and a user of 'fly-in, fly-out' (FIFO) labour in Far-West mines. The increasing use of FIFO and 'drive-in, drive-out' workforce practices worldwide provides an opportunity for employment without having to move residence, encouraging families to stay in rural towns. A highly mobile workforce, who establish their homes and raise their family in NSW, while working where the jobs are, provide a strong economic benefit to NSW.

The major challenge for access to remote work is aviation coverage limitations. The regulation of air routes and airport capacity is too slow to adapt to demand, meaning that workers in many regional towns are effectively locked out of these opportunities.

NSW businesses and Government services are also increasingly a user of FIFO labour. FIFO is not only for miners. Health and legal professional services are provided in many regional areas by non-residents.

NSW mining is expanding in the North West (unconventional gas sources) and the South West (iron ore and minerals). Many workers will choose not to locate their families in mining towns for various reasons, including employment opportunities for other family members and social considerations. The shortage of affordable housing in mine areas is the single biggest reason for workers not moving to rapidly growing mine areas. As mines go through the development and construction phase to operations, both economic and social infrastructure struggles to keep pace.

The House of Representatives Standing Committee on Regional Development is expected to report shortly on the use of FIFO workforce practices in Regional Australia.

³ Transport for NSW 2012, Draft Transport Master Plan.

5.3 Regional NSW in 2031

5.3.1 Population and Economic Growth by Region

The baseline economic and demographic forecasts prepared by Deloitte Access Economics for Infrastructure NSW shows that:

- The population of Regional NSW is expected to grow by 0.7 percent per annum to 3.1 million, slower than Sydney's growth of 1.3 percent per annum. This means that by 2031, the regional population is expected to fall from 36 percent to 34 percent.
- GSP is expected to grow at a slower rate, (by 2.1 per cent per annum) than the Sydney growth of 2.9 percent per annum. This means that in 2031 the regional proportion of GSP will fall from 26 percent to 23 percent.
- However, employment grows at nearly the same rate in Regional NSW as in Sydney (0.86 percent per annum compared to 0.97 percent).

The forecast growth is not experienced evenly across Regional NSW. The population and growth in GRP in each of the five sub-regions is summarised in Table 5.2:

Table 5.2 Sub-Region Population and Economic Growth Rates 2011 - 2031

Sub-region	Population Growth Rate	GRP Growth Rate
Hunter	1.0%	2.5%
Illawarra and South Coast	1.0%	2.5%
North Coast	1.0%	2.5%
Inland NSW	0%	1.4%
Murray Riverina	0.3%	1.7%

Source: Deloitte Access Economics.

Deloitte Access Economics report⁴ that:

- The main factor affecting the Murray sub-region, agriculture in Inland NSW and overall regional economic and population growth in coming years will be decisions over water entitlements and allowances.
- The long drought has had an impact on forecasts and the population outcomes and movements of people throughout regional NSW may be different to the forecasts due to changes in weather conditions, changes in the terms of trade, the demand for resources and agriculture products, and the impact of new policies.

- The coastal areas are expected to grow faster than the inland areas due to resource endowments and the impact of the 'sea change' and 'tree change' phenomenon. The coastal areas closest to Sydney – the Hunter and Illawarra – will also benefit from their proximity to Sydney. Newcastle is forecast to grow by 58,000 and Wollongong by 33,000 people by 2031.
- Carbon pricing is expected to result in a dip in production in Regional NSW, with the greatest shock felt in the Hunter region.
- The economy of each sub-region is expected to become more diverse and services based over the next two decades, with a big shift away from manufacturing. Sectors with strongest growth are expected to be mining (particularly in the first decade), health and social services.

5.4 Infrastructure priorities in Regional NSW

The development and future prosperity of metropolitan NSW and Regional NSW are interlinked. Efficiently operated and developed metropolitan infrastructure is as vital to the regional prosperity and lifestyle as specific and focussed regional projects. Each cannot be considered in isolation from the other.

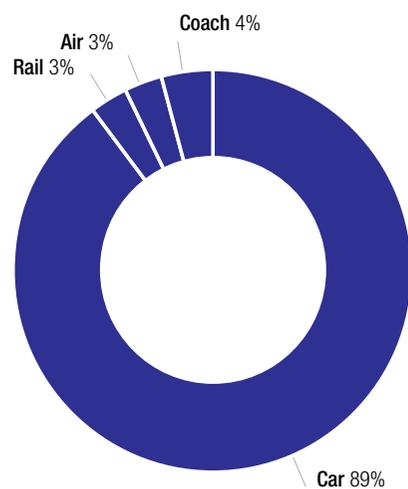
⁴ Deloitte Access Economics 2012, The NSW Economy in 2031-32, Report to Infrastructure NSW.

5.4.1 Connecting people

Every day in Regional NSW, people make 7.5 million trips⁵. Connecting people efficiently is central to the economic and social well-being of regional communities, businesses and individuals.

With nine out of ten regional passenger trips being by car⁶, the road network is vital in connecting regional people to employment opportunities, services and amenities. It is also important to note the small share of bus and train trips. These travel patterns are not expected to change over the next twenty years.

Figure 5.3 Mode share for trips beginning or ending in Regional NSW



Source: Transport for NSW.

⁵ Transport for NSW 2012, Draft Long Term Transport Master Plan.

⁶ Transport for NSW 2012, Draft Long Term Transport Master Plan.

A number of regions are expected to achieve steady growth in employment and population, driven in part by an increase in mining activity or relative proximity to Sydney. Infrastructure investment to increase access to high value employment opportunities is likely to lead to higher economic growth and reduced migration of young people from regional areas.

Over the next 20 years, targeted investment is needed to support these commuting patterns, by improving access to the metropolitan areas and access to air travel, both of which are discussed in Section 10.

5.4.2 Improving Local Transport

The implications of ‘two-speed’ economic and population growth for regional communities needs careful consideration.

Regions expected to achieve steady growth in employment and population will need additional investment in both hard and soft infrastructure. Local congestion and environmental issues can have major impacts of people’s quality of life.

For example, action is needed in the Hunter to manage the amenity effects of rapid growth in the size and frequency of coal transportation. Mining affected communities face a specific set of transport challenges associated with rail lines and crossings.

Across the regions, rural roads need adequate maintenance and upgrading where required for growing demand. Details of the priorities and investment options for NSW highways are outlined in Section 10.

5.4.3 Access to markets

The ability of NSW producers to get agriculture, industrial products and natural resources to market by road in a timely and efficient manner directly impacts on productivity and competitiveness – and hence the economic performance of Regional NSW. Regional production is heavily reliant upon efficient and effective transport networks.

Australia uses three times as much freight activity to produce one dollar of economic output than is the average across the Organisation for Economic Co-operation and Development (OECD)⁷. Freight costs and efficiency impact the total cost of all export and import goods, which are moved intrastate, interstate and to the major ports to service the export market. The current combined freight task in NSW is estimated at over 409 million tonnes per annum and is expected to increase to approximately 794 million tonnes per annum by 2031⁸.

The majority of the NSW freight task by volume, (60 per cent), is intrastate freight (origin and destination within NSW), highlighting the interdependence of the regional economy and the Sydney metropolitan area. The remaining 40 percent is made up of interstate freight (20 percent), export goods accounts for approximately 17 percent and imported goods is the smallest proportion of the freight task (around 3 per cent). Regional freight supply chains operate into and out of the regional port gateways of Newcastle and Port Kembla⁹,

⁷ National Road Transport Commission 2001, Options for Regulation of the Road Freight Industry.

⁸ Transport for NSW 2012, Draft Long Term Transport Master Plan.

⁹ The two small regional ports of Yamba and Eden are not reviewed in this strategy due to the relative size of their markets and stable growth prospects.

to and from metropolitan markets (primarily Sydney) and within Regional NSW as illustrated in Figure 5.4.

Road is the most heavily used mode for freight transport, responsible for 63 percent of volume, followed by rail at 33 percent¹⁰.

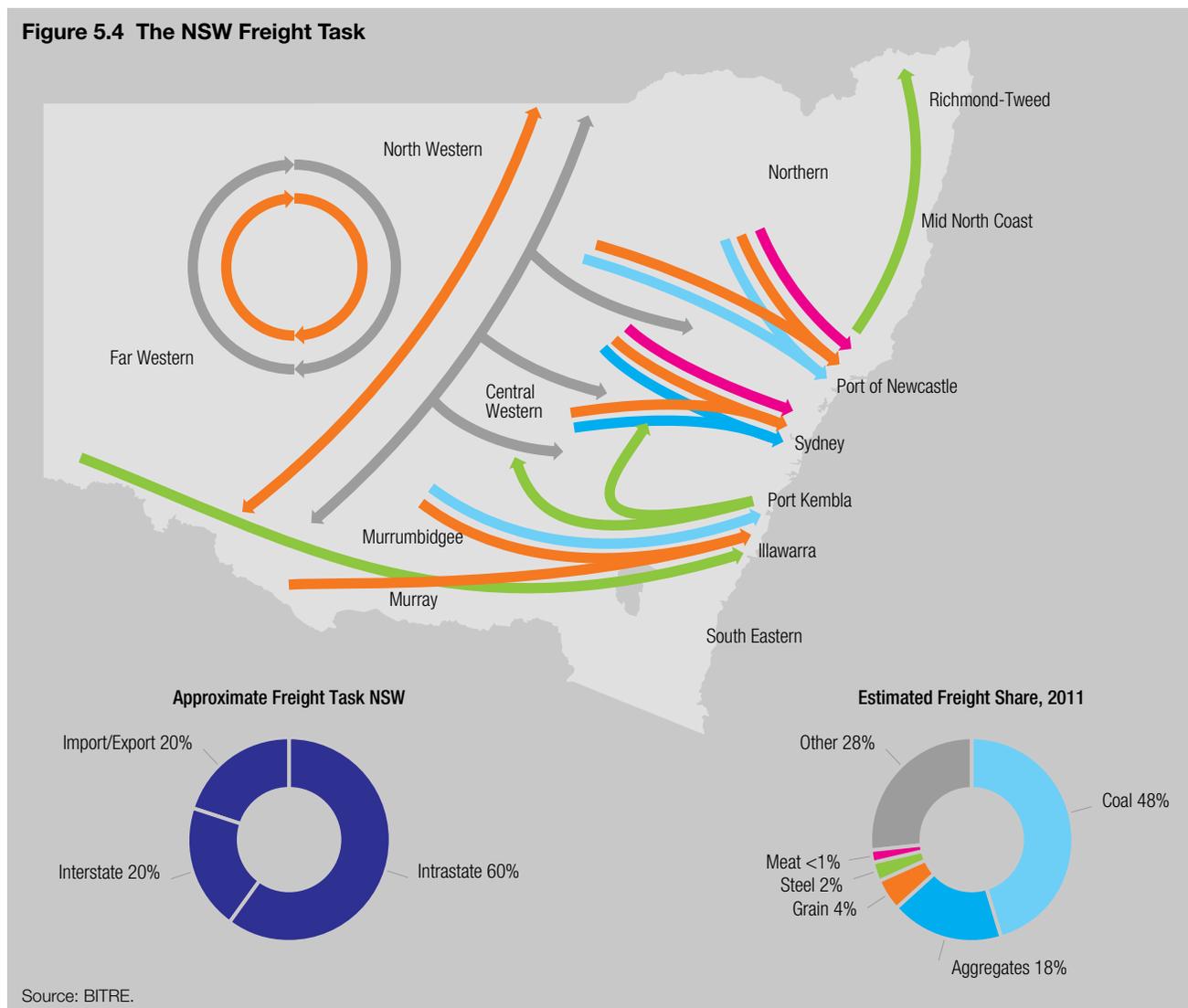
As described in Section 2, there are deficiencies in the assessed capacity and condition of some sections of both the regional road and rail network to meet current demand.

In addition, inefficient metropolitan road and rail network is as much an issue for Regional NSW as farm gate or last mile access. The cost for freight to access Sydney gateways is the highest on the Australian east coast. Road transport costs per tonne equivalent unit (TEU) and warehousing costs per square metre were greater in the Sydney market than any other Australian capital city market¹¹. These metropolitan based logistics costs have flow on effects to regional NSW, both on the cost effectiveness of accessing the key Sydney basin market and on the cost of supplying consumer and industrial goods to Regional NSW areas.

International demand for resources means that mining areas in the Far West of NSW, further from export ports, are becoming economically viable – including coal, mineral and coal seam gas mines that are now being developed. The road and rail links in Inland NSW will require significant investment if they are to be capable of carrying the expected level of mine and agricultural production over the next 20 years.

¹⁰ Transport for NSW 2012, Draft Transport Master Plan.
¹¹ FALCONSW 2008, Four Key Supply Chain Opportunities for Innovation.

Figure 5.4 The NSW Freight Task



The Councils of Western NSW¹² for example, has identified over a thousand kilometres of strategic links in the road network to mine areas that require initial sealing or rehabilitation if these roads and bridges are to be capable of supporting mine operations.

It may be beyond the capacity of the local Government sector to fund the freight network. In assessing the capacity and condition of the regional road network, Infrastructure NSW observed that the traditional road hierarchy and boundaries between local Government roads, State and Federal roads has not worked well to support the growing export-oriented regional economy. Partly as a result of this hierarchy, high productivity vehicle types can't use many of our roads.

Bulk Export Freight Demand

Bulk export freight (coal, grain, minerals and metals) is moved by both the road and rail networks of Regional NSW to the processing plants and the port gateways of Newcastle and Port Kembla. It comprises around 15 per cent of the total freight task by volume (but around half of the freight task by weight). The majority of export bulk commodities utilise rail infrastructure to reach the gateways.

Coal is the largest and fastest growing commodity freight task in NSW, (around 170 mtpa¹³), most of which moves through the Port of Newcastle¹⁴.

¹² Central NSW Councils 2011, Submission to the NSW Legislative Council, Standing Committee on State Development, Inquiry into Economic and Social Development in Central Western NSW.

¹³ Transport for NSW 2012, Draft Transport Master Plan.

¹⁴ Newcastle Port Corporation 2011, Annual Report.

Bulk export freight in NSW is expected to grow rapidly over the next twenty years and will continue moving primarily through the Port of Newcastle and Port Kembla¹⁵. It is expected that demand will more than double and continue to rely on rail infrastructure, although road will also play an important role.

To meet this demand will require additional rail capacity to be developed and the network extended in a timely manner for the forecast growth in GSP.

Intrastate and Interstate Freight Demand

Non-export intrastate freight consists of the full range of commodities, agricultural products and goods. The largest categories of these include construction materials, domestic coal, domestic grain, metallic minerals, waste, and containerised freight.

Intrastate freight relies predominantly on the State's road networks to access local and international markets, although rail also contributes to the transport task. The road network is the dominant mode to access both Sydney and Port Botany (for export) by containerised freight. Productivity and efficiency constraints on these roads are common and solutions need to be focused on increasing access of High Productivity Vehicles (HPV) and High Mass Limit (HML) vehicles to specific corridors for the major supply chains to enhance the competitiveness of the regional suppliers.

The interstate freight task is also significant. Approximately 60 million tonnes per annum of freight is moved to and from NSW comprising some 20 percent of the total state freight task by volume¹⁶.

¹⁵ Newcastle Port Corporation, Port Kembla Port Corporation.

¹⁶ BTRE 2010, Interstate Freight in Australia, Research Report 120.

The dominant corridors of interstate freight are the pairs of Sydney and Melbourne and Sydney and Brisbane. Of this freight task, the primary method of transport is road with over 80 percent, followed by rail at approximately 10 percent and then sea and air freight on a mass tonnes basis. The large road freight task is based on overnight and 'just in time' delivery requirements.

Demand over the next 20 years is expected to see the interstate freight task more than double by 2031¹⁷. Road freight is expected to continue to dominate the interstate freight task.

Major investments, (underway or proposed) for freight solutions on the road and rail network are discussed in Section 10.

5.4.4 Water Infrastructure

Water supply and sewerage services in Regional NSW are provided by 95 local councils, five county councils and five water supply authorities. These utilities provide water supply and sewerage services to 1.8 million people (or 98 percent of the State's regional population).

The infrastructure investment in regional water utilities is substantial. The replacement value of water supply and sewerage infrastructure is about \$23 billion and the associated services generate annual revenue of \$10.4 billion.

Lack of suitable water supply infrastructure can be clearly shown to inhibit economic growth¹⁸. If a local Government is not able provide a secure water supply

¹⁷ BTRE 2010, Interstate Freight in Australia, Research Report 120.

¹⁸ NSW Business Chamber, Keeping the Water Flowing: Protecting the Water Supply in the Murray-Riverina.

sufficient to allow additional connections, then new development and growth cannot proceed. For example, in 2004 Yass Valley Council imposed strict controls on the approval of new Development Applications on the basis of lack of security in water supply. Following Council's approval of the raising of the Yass Dam Wall, these controls were able to be lifted, demonstrating the clear nexus between investment in water infrastructure and economic development¹⁹.

Regional communities are facing a decline in the capacity of their water systems to meet future water demand. A study conducted jointly by NSW Public Works and the NSW Office of Water, (using CSIRO methodology), estimates that global warming and climate variability is likely to cause a 30 percent reduction in the secure yield of many inland regional water systems by 2030.

Infrastructure investment will be needed for new water sources to augment water supply from existing declining yield sources, such as:

- new dams and dam augmentations storing more water to counter prolonged droughts; and
- increased pumping capacity and off-stream storages to extract the maximum allowable water from streams during periods of high stream flows.

The NSW Office of Water estimates the investment value of regional water utilities needed to counter the impacts of climate variability and global warming may be up to \$1.3 billion. This is in addition to the utilities' current 30 year capital program of \$11 billion, which has not

¹⁹ Yass Valley Council 2008, Report to Council 'Water Policy for New Developments'.

factored in the costs associated with global warming and climate variability.

There are ongoing subsidies from the State Government to local water authorities for works to water and waste water systems for compliance with national health guidelines in Regional NSW.

Infrastructure in Western areas also experienced significant deterioration during the 2011 and 2012 floods. This has highlighted ongoing concerns regarding the ability of regional communities to deal with the impact of natural disasters like drought and flooding.

A number of areas to improve water management and security and improve resilience and flood protection have been identified in Section 12.

5.4.5 Energy Production in the Regions

Energy and gas production businesses are forecast to grow rapidly in the next 20 years and will increase this industry's share of the economy from 2.5 percent to 3.5 percent over the next 20 years. Coal will remain a major source of energy for NSW²⁰.

NSW regions in the North-West, Gunnedah basin and Upper Hunter areas have the benefit of very large reserves of coal seam gas for development of a new and extensive, high value energy industry. The NSW Government has estimated that production could provide 18,000 jobs, up to \$1 billion in royalty revenue and add \$3 billion a year to GSP²¹.

²⁰ Deloitte Access Economics 2012, The NSW Economy in 2031-32, Report to Infrastructure NSW.

²¹ NSW Government 2011, Submission to NSW Legislative Council General Purpose Standing Committee No5, Inquiry into Coal Seam Gas.

Energy infrastructure issues are discussed in Section 11.

5.4.6 Health

Thirty percent of health assets are physically located in regional areas, supported by the large, specialist hospitals located in and around Sydney that provide services to all of NSW.

The regional health and social services industry sector is expected to grow by 25 percent in the next 20 years (from 6.1 percent to 7.6 percent²²). However, the large distances, a dispersed population, and difficulty in attracting and retaining staff are all significant challenges in the delivery of regional health services. This is compounded by the specific impacts of an ageing population in all regional areas of NSW, particularly the North and South Coast regions that provide popular retirement destinations. Each region's utilisation of hospitals, forecast growth in demand and the planned major works are summarised in Table 5.3.

Patients in regional areas are increasingly affected by the need to travel for specialist care and consultations. The National eHealth Strategy agreed by COAG in 2009 set out an action plan for eHealth based on implementing the national 'health information highway' infrastructure and rules to allow information to be seamlessly accessed and shared across the Australian healthcare system.

²² Deloitte Access Economics 2012, The NSW Economy in 2031-32, Report to Infrastructure NSW.

Table 5.3 Hospital Utilisation by Region

Regional Action Plan Area	Average Available Beds*	Bed Occupancy Rate	Forecast Increase in Demand, Acute Care	Forecast Increase in Demand, Sub-Acute Care	Major Works
Hunter New England	3.2	75%	13%	41%	Tamworth Redevelopment and Stage 3
					Maitland/ New Hunter
					Morrisset/ Kestral
					Armidale Redevelopment
Illawarra	1	97%	24%	67%	Bega Hospital
Southern	0.5	75%	24%	67%	Goulburn Base Redevelopment
Mid North Coast	0.7	95%	13%	183%	Kempsey Redevelopment
					Port Macquarie Base Hospital
Northern Rivers	0.8	95%	13%	42%	Lismore Base Hospital Stage 3
					New Northern Rivers Hospital
Western	1.5	74%	5%	41%	Parkes, Forbes Hospitals
					Dubbo Hospital
					Gulgong MPS
Murrumbidgee	1.3	70%	16%	22%	Lockhart MPS
					Wagga Wagga Stage 3
Far West	0.2	66%	No increase	No increase	

Sources: NSW Health; PwC.

*Beds per 1000 head of population.

Regional health costs and services would significantly improve with increasing use of these tools, including audio conferencing, video conferencing and web meetings for consultations and telehealth services to remotely monitor and manage patients at home. However these tools are not yet in place for some communities. Detail of the strategies to meet sub-acute demand by care models that are ‘out of hospital’ and to encourage private sector provision of public hospital services are provided in Section 13.

5.4.7 Social Infrastructure

The demographic differences in Regional NSW will have an impact on utilisation and development of education services across the regions. For example the impact of demographic profile, with lower proportions of 20 to 40-year-olds, is reflected in the forecast growth in the school population. Primary school growth is expected to be four percent in Murray Riverina and eight percent in the coastal regional areas, which is less than half the forecast growth in Sydney. There is almost no forecast growth in the regional secondary school population in the next ten years, compared to around 10 percent growth in Sydney.

Justice services are a vital community service. Increasingly the provision of justice services are being provided by innovative new IT solutions, without the reliance on familiar hard infrastructure such as court houses, or even the physical presence of key participants.

Regional social infrastructure issues are discussed in Section 14.