



# **Inquiry into jobs for the future in regional areas**

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Senate Select Committee on Jobs for the Future in  
Regional Areas

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## Introduction

The Hunter Business Chamber (The Chamber) is the largest regional business chamber in Australia, established in 1886. The Chamber independently represents about 2,000 member organisations to all levels of government and is the peak business and industry association in the region, reflecting the interests of all sectors.

The Chamber works as an integral part of the NSW Business Chamber network. We advocate to government local, state and federal level for business-positive policies that promote investment and growth to deliver flow-on benefits to all in our community.

The Hunter Region in NSW is Australia's largest regional economy, with a Gross Regional Product of more than \$50 billion per year, driving more than one quarter of the total economic output of NSW. The region encompasses 10 local government areas (LGAs) with a total population of nearly 700,000 and a workforce of 280,000<sup>1</sup>. It encompasses the Greater Newcastle Metropolitan Area, the seventh largest urban area in Australia, which incorporates the LGAs of Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock. The region has an estimated 322,000 jobs, projected to increase to 384,000 by 2036.<sup>2</sup>

The Hunter is an economically diverse region encompassing strong foundations in resources, manufacturing and agriculture, with a fast-growing health, education and service sector and increasing focus on innovation and intellectual resources, including world-class education, health and medical research facilities. It supports a wide spectrum of complementary and emerging industries, including renewable energy technologies, defence and aerospace, tourism and the digital economy. It is situated on Australia's main east coast transport corridor with sophisticated infrastructure and two major international gateways in its airport and deepwater sea port.

Mining, manufacturing and construction are the key industries by output, while health care and social assistance is the highest employing sector, followed by education and training and retail. The Port of Newcastle is the world's leading coal export port, with mining accounting for 38 per cent of the region's exports by value<sup>3</sup>.

Economic diversification is a key issue for the Hunter to ensure the region's prosperity and liveability are maintained into the future. While demand forecasts indicate mining and the export of coal will play an important role in the Hunter economy for decades to come, there is a strong regional focus on diversifying the economic base to ensure its future strength and resilience. Coal is a finite resource and likely to face increasing competition from renewable energy sources, so there is an imperative to identify new opportunities for investment and employment. Planning to transition the regional economy over the longer term is essential if

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<sup>1</sup> Remplan, City of Newcastle and Hunter Economy Profile <https://www.economyprofile.com.au/newcastle/industries/gross-regional-product>

<sup>2</sup> Hunter Regional Plan, p17 <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/Hunter/Hunter-regional-plan/The-leading-regional-economy-in-Australia>

<sup>3</sup> Remplan, City of Newcastle and Hunter Economy Profile (as above)

the Hunter is to develop a more diverse and resilient economic base that will support the growth of the region into the next century.

The Hunter Business Chamber appreciates the opportunity to contribute to this inquiry and offers the following comment in line with the terms of reference.

### **Part a: New industries and employment opportunities that can be created in the regions**

The Hunter already boasts a diverse economy and while there is an increasing focus on attracting new industries, particularly in the knowledge sector, some of the best opportunities for employment growth lie in ongoing development of existing sectors.

A number of studies have been completed to identify regional priorities for business investment and attraction. Regional Development Australia's [Smart Specialisation Strategy for the Hunter Region](#) (2016) identifies seven priority areas based on the region's current strengths and competitive advantages:

- Advanced Manufacturing;
- Defence;
- Food and Agribusiness;
- Creative Industries;
- Medical Technologies and Pharmaceuticals;
- Mining Equipment, Technology and Services;
- Oil, Gas and Energy Resources.

These growth areas are endorsed in the [Hunter Regional Plan](#), which notes that there are also other industries, such as tourism, health and education, which are expected to expand as part of an overall national trend.

The [Upper Hunter Economic Diversification Plan](#) (2018) identifies economic development opportunities in both new and existing industries for the part of the region incorporating the local government areas of Dungog, Singleton, Muswellbrook and Upper Hunter, where local industry and employment is focused heavily on mining and power generation. The plan outlines the key sectors for future growth as:

- An expanding Agribusiness Sector;
- A Continuing Mining and Engineering Services Sector
- A Transitioning Power and Energy Sector

This section of our submission elaborates on some of the key areas of economic growth for the Hunter region in which the Chamber sees immediate opportunity. In addition, we refer the committee to the submission by the Australian Industry Group for more information on regional opportunities in advanced manufacturing and the City of Newcastle submission, which references emerging strengths in smart technology.

## **Williamstown Defence/Aviation/Aerospace precinct**

The arrival of the Joint Strike Fighter (JSF) program at RAAF Base Williamstown and the planned expansion of aviation and aerospace activity in and around Newcastle Airport promise to drive significant investment, new jobs and economic benefits to the region, as well as contributing to the diversification of the economy. [The Greater Newcastle Metropolitan Plan 2036](#) recognises that the growth of this precinct will play an important role in the creation of a regional workforce skilled and ready for the new economy.

RAAF Base Williamstown and the Newcastle Airport occupy a coastal site north of Newcastle with shared runway facilities. RAAF Base Williamstown is the nation's premier fighter aircraft base and the primary base for Australia's 72-strong fleet of F35 Lightning II Joint Strike fighter aircraft. The first two JSF aircraft arrived at Williamstown in December 2018 following a \$1 billion investment to prepare the base for the JSFs. As well as hosting the Australian fleet, Williamstown is the Asia-Pacific sustainment hub for the JSF program, ensuring an ongoing pipeline of work and significant opportunities to enhance the local skills base and build regional defence capability.

Lead sustainment partner BAE Systems Australia has established an operation close to the Williamstown RAAF Base. It is one of the largest defence contractors in Australia and will employ around 400 people to support the Joint Strike Fighter fleet during the 30-plus years of the aircraft's service life. The project will create demand in high skilled fields such as aerospace engineering, IT and avionics specialties.<sup>4</sup>

Simultaneously, Newcastle Airport is experiencing a period of significant growth, with concentrated strategies to build new domestic and international markets, increase visitation, expand the facility and further the region's position as an aerospace hub through the development of a defence and aerospace technology park called [Astra Aerolab](#). The 76-hectare Astra Aerolab precinct is expected to generate 5,500 new jobs and will support companies in both commercial aviation and defence sectors, as well as enhancing the region's capacity for research, development and skills training<sup>5</sup>.

The NSW Government has provided \$11.7 million to support stage one of the precinct development and is assessing a business case for the declaration of a Special Activation Precinct across the Williamstown precinct to accelerate investment.

Further substantial economic uplift in the Williamstown precinct could be realised with the upgrading of the runway to Code E standard, which would position the airport to accommodate larger, longer-range aircraft. This would increase its viability as a destination for airline partners, opening new trade and tourism opportunities across Asia and in parts of

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<sup>4</sup> BAE Systems <https://www.baesystems.com/en-us/feature/joint-strike-fighter>

<sup>5</sup> Astra Aerolab website <https://www.astraerolab.com.au/>

North America and Africa. There is an imminent opportunity to complete the runway upgrade in conjunction with maintenance and overlay works Defence has committed to undertake in 2020. Subsequently, the Airport is seeking government support for a \$147 million runway and airport upgrade. Economic modelling indicates that the upgrade would return more than \$6 billion to the regional economy over the next 20 years, and \$3.6 billion to the state economy, with the creation of 1600 new jobs in the Hunter and an additional 850,000 visitors per year to boost the visitor economy.<sup>6</sup>

### **Hunter Defence**

The Hunter Business Chamber plays a key role in enhancing defence industry capability in the region as a funding partner of Hunter Defence, a collaborative task force focused on demonstrating the capability of established Hunter defence industry suppliers to government and primes, as well as upskilling local SMEs to become 'Defence ready'.

The Hunter region is a national leader in Defence support, supply and sustainment, with strong industry capabilities across land, sea and air. These capabilities are complemented by an experienced and efficient logistical network

The Hunter has strong expertise in advanced high-value, high-skills manufacturing and R&D, so there is great potential for locally based METS firms to diversify into defence or, for those who already established in the industry to increase their market share.

Many local manufacturing firms have developed strong Defence capability and many more have potential to participate in the sector. The region has the second highest concentration of defence employment in NSW at 19 per cent and an available skilled workforce for aerospace, ship building, and naval and commercial vessel sustainment<sup>7</sup>.

The region boasts a very strong defence industry ecosystem. Local companies have established partnerships with global defence industry supply chains, including Boeing, BAE Systems, Thales, Lockheed Martin and Raytheon, and the Defence and Security Research and Innovation Hub at the University of Newcastle encourages engagement between the University and the defence industry. In response to industry needs and as a demonstration of local collaboration, the University has developed a Bachelor of Aerospace Engineering degree which will directly feed graduates to career opportunities associated with Defence and civil aviation applications.

Hunter Defence is seeking government support to continue its activities in providing regional advocacy, advice and training.

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<sup>6</sup> Newcastle Airport Runway Upgrade Project, Economic Impact Statement Overview

<sup>7</sup> NSW Government Regional NSW website <https://www.investregional.nsw.gov.au/regions/hunter/#79>

## Health and Medical Research

The John Hunter Hospital is the principal referral centre and tertiary hospital for Newcastle and a large part of northern New South Wales, as well as being the main teaching hospital of the University of Newcastle. Adjacent to the hospital is the Hunter Medical Research Institute, a centre for translational research supporting over 1500 researchers, students and support staff from Hunter New England Health and the University of Newcastle.

The NSW State Government has announced a \$780 million first-stage redevelopment of the John Hunter campus that will deliver increased and improved clinical capacity and facilitate an enhanced health, education and research precinct servicing the region and northern NSW. The precinct will meet increasing demand for a broad range of health services and contribute significantly to the development of the region's knowledge sector.

Health care and social assistance is the Hunter region's leading employment sector, with nearly 45,000 employees, and has substantial capacity for growth given Australia's ageing population and the global trend for increased spending on health services. The John Hunter Hospital is the region's single largest employer, with about 4,000 employees, including 17 per cent of the region's health, science and IT knowledge workers. It is also a highly educated and skilled workforce, with more than 60 per cent of its employees having a bachelor degree or higher qualification.<sup>8</sup>

The health sector offers substantial opportunity for new jobs growth across the region, driven by the redevelopment of the John Hunter Health and Innovation Precinct.

## Agribusiness

Agribusiness is identified as a key opportunity for economic and employment growth in the NSW Government's Upper Hunter Economic Diversification Plan. It identifies potential in expansion of existing industries in dairy, beef, cereals, oil seeds, wine and equine, emerging industries in industrial hemp and protected cropping and development of new industries in processing of dairy, pork, poultry and hemp.

Agribusiness plays a strategic role in the Upper Hunter economy, with more than 1900 businesses employing 2,300 people and generating \$500 million (2015), without taking into account the strongholds of the wine and thoroughbred industries. In addition, food processing employs more than 650 in the region<sup>9</sup>.

Agribusiness is a sector in which there is strong growth forecast globally and in which Australia, and the Upper Hunter in particular, has strong advantages. The Hunter is an

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<sup>8</sup> Dr Anthea Bill, Hunter Research Foundation, Value for the Hunter presentation <http://www.hrf.com.au/uploads/publications/JHH-PRESENTATION-30-08-18-Final.pdf>

<sup>9</sup> Michael Connell, Agribusiness in the Upper Hunter presentation <http://www.hrf.com.au/uploads/events/Agribusiness-in-UH-MC-May2017.pdf>

international centre for wine production and thoroughbred breeding, with major agricultural strength in dairy, beef cattle and sheep, poultry, dryland cropping, irrigated cropping and fodder, and emerging strengths in oilseeds, legumes and nuts, and food processing. There are also opportunities to further develop agri-tourism linking in with food and wine production and the equine sector.

### **Gas and renewables – power generation and research**

The Hunter's expertise in energy generation, existing infrastructure and research capability position it well to be a leader in the development of gas and renewable energy technology and power generation. The Hunter is a significant source of power generation in NSW, however prospective closures of Liddell and Bayswater power stations in 2022 and 2035 respectively will hasten the need for diversification in the mix of energy technologies.

The region is already an innovation hub for alternative energy, with leading research being conducted through the Newcastle Institute for Energy and Resources at the University of Newcastle and the CSIRO Energy Centre in Newcastle, which is the organisation's solar field and energy research hub.

The Chamber participates in the [Hunter Energy Transition Alliance](#), an alliance between government, industry and community stakeholders to attract new investment and achieve economic diversity for the Upper Hunter Region.

A number of renewable gas and renewable energy projects, either proposed or approved, have potential to provide new employment opportunities in a low-carbon economy, however it should be noted that the majority of jobs are in construction, with more limited ongoing employment opportunities in the operational phase. Power generation currently supports about 2200 jobs in the Hunter.<sup>10</sup>

The next section of this submission addresses some of these opportunities in more detail.

### **Part b: The number of existing jobs in regional areas in clean energy technology and ecological services and their future significance.**

A number of renewable gas and renewable energy projects, either proposed or approved, have potential to provide new employment opportunities in the Hunter. These include the following:

- **[Bowman's Creek Wind Farm](#)**: A 250 megawatt wind farm at Bowmans Creek, east of Muswellbrook proposed by renewable energy company Epuron. The 70- to 80-turbine Hunter project is in an area with extensive existing high voltage transmission lines suitable for connection.

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<sup>10</sup> Hunter Investment Prospectus, <http://rdahunter.org.au/wp-content/uploads/2019/06/2019-Hunter-Investment-Prospectus-Online.pdf>

- **Maxwell Solar Project**: A 25 megawatt solar farm proposed by Malabar Coal on the site of the former Drayton colliery with potential to provide power to more than 100,000 homes. It is estimated the project would generate about 50 jobs during construction. The site is adjacent to the Liddell and Bayswater Power Stations with access to high voltage power lines offering a simple and low-cost connection to the grid.
- **Upper Hunter Energy Park**: A \$190 million proposal for a wind and solar farm near Scone that received NSW State Government approval in 2010. Featuring 34 wind turbines and 100 hectares of solar panels with a generating capacity of up to 113 megawatts of renewable energy, the park could provide renewable power to more than 47,000 homes. The Upper Hunter Energy Park will be constructed by Pamada Pty Ltd, creating 183 construction jobs and 12 ongoing jobs.
- **Vales Point solar project**: A \$75 million proposal by Delta Electricity for a 55 megawatt solar energy project at Vales Point power station in Lake Macquarie. The project, which could potentially power 20,000 homes, will be built on a 80 hectare area of rehabilitated ash dam that forms part of the broader power station site. The project will support 100 construction jobs and up to five ongoing positions.
- **Hunter Pilot Biorefinery**: A purpose-built biofuel research facility, which is the first of its kind in the Southern Hemisphere. The foundation project of the biorefinery is a \$30 million cellulosic ethanol pilot plant project by Apace Research Limited (Apace), Ethanol Technologies Limited (Ethtec), the Australian Renewable Energy Agency (ARENA), Chinese engineering company JTL and the University of Newcastle. The first stage is under way and the facility is expected to employ up to 20 researchers and technicians.
- **Liddell Power Station Transition – NSW Generation Plan**

AGL, the operator of the Liddell Power Station has committed to retire the coal-fired Hunter Valley plant in April 2023. Liddell produces enough electricity to power 1 million homes and the Australian Energy Market Operator identified an 850MW gap in dispatchable power when Liddell closes. AGL has developed the NSW Generation Plan, a program of alternative energy initiatives, including investments in new low-emissions technologies, to replace Liddell.

AGL plans to replace Liddell with the following:

- The Newcastle Power Project – a 250MW gas-fired power station in Newcastle (see details below);
- A second gas-fired power station in NSW of 500MW capacity;
- 1,600MW of renewables, including solar power;
- Up to 150MW of demand response;
- The 250MW “Liddell Battery”;

- Converting generators at Liddell to synchronous condensers;
- 100MW upgrade to Bayswater Power Station;
- Possible pumped hydro project.

There are also two major gas projects proposed for the region.

- [The Newcastle Power Project](#)

AGL has committed \$490 million to the first stage of its Liddell replacement plan, which includes the construction of a 250MW gas-fired peaking station at Tomago, in Newcastle, close to its existing gas storage facility. The plant will use peaking gas power, which can be turned on during peak demand periods or whenever renewables are not available. The project has been declared State Significant Infrastructure by the NSW Government. A preliminary Environmental Assessment has been submitted but does not include projected employment figures.

- [Newcastle GasDock LNG Import Terminal](#)

South Korean group EPIK Co Ltd has proposed a liquefied natural gas (LNG) project for Newcastle involving the use of an LNG Floating Storage and Regasification Unit (FSRU) in the city's harbour. The 170,000m<sup>3</sup> class FSRU will connect to a new jetty planned to be built on port land at Kooragang Island, enabling a connection to the existing east coast natural gas network. The project has a total estimated value of \$589 million, including \$250 million for potential onshore infrastructure at the port. No job projections have been provided at this stage.

### **Part c: Lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies**

The closure of the BHP Steelworks in 1999 is widely regarded as the most significant single event to influence industry and workforce restructuring in the Hunter region. Although there were undeniably repercussions for many displaced workers who were unable to find alternative employment, a cooperative effort by the company, government and unions, involving comprehensive retraining opportunities for steelworkers, minimised the economic impacts.

Other submissions to this inquiry by Hunter regional stakeholders provide more detailed examination of this case study and the Chamber directs the committee's attention to those. A number of studies have focused on or referenced the social and economic impacts of the closure including the following:

- Diversification of the Hunter economy – post BHP (2011), Hunter Valley Research Foundation  
[http://www.rdahunter.rdahunterstem.org.au/wp-content/uploads/2019/03/Diversification\\_of\\_the\\_Hunter\\_Economy\\_Post\\_BHP.pdf](http://www.rdahunter.rdahunterstem.org.au/wp-content/uploads/2019/03/Diversification_of_the_Hunter_Economy_Post_BHP.pdf)

A report by the National Centre for Vocational Education Research provides an interesting case study of the impacts of industry restructuring in the Hunter on older workers.

- Industry restructuring and job loss: helping older workers get back into employment. Support document 2: case studies (2015), National Centre for Vocational Education Research (NCEVER)  
[https://www.ncver.edu.au/\\_data/assets/file/0030/9984/industry-restructuring-case-studies-2839.pdf](https://www.ncver.edu.au/_data/assets/file/0030/9984/industry-restructuring-case-studies-2839.pdf)

The Chamber also draws the committee's attention to the submission by Cessnock City Council to this year's federal government inquiry into how the mining sector can support businesses in regional economies (conducted by the Standing Committee on Industry, Innovation Science and Resources). The submission provides insights into the socio-economic difficulties experienced by a community when a major sector (in this case, mining) declines and the factors that can hinder transition to new industries.

Submission link: <https://www.aph.gov.au/DocumentStore.ashx?id=0403e3c9-cdbc-4c38-a07f-260623a09571&subId=658517>

#### **Part d: The importance of long-term planning to support the diversification of supply chain industries and local economies**

Investment in regional infrastructure will be essential to unlocking the economic potential of the Hunter and continuing to build diverse and resilient regional economy for the long term. The Hunter Business Chamber welcomes Infrastructure Australia's recent call for more investment in satellite cities including Newcastle to ensure that key regions such as the Hunter have capacity to support national growth.

The [2019 Australian Infrastructure Audit](#) says a new wave of investment and reform is needed to ensure Australia's quality of life and economic productivity over the next 15 years. It highlights the potential of smaller cities and satellite regions to alleviate the pressure on congested capital cities. The Audit recognises infrastructure in our four largest cities is failing to keep pace with population growth and notes the substantial capacity that satellite cities like Newcastle have to grow through the use of legacy infrastructure and targeted upgrades. It suggests governments can get value for money by investing in regional areas, where there is opportunity to support growth at a scale of additional investment significantly less than in the capital cities.

The Chamber has identified a number of strategic infrastructure priorities of national significance that would support regional economic diversification, increase job opportunities in the region and provide solutions to metropolitan congestion and overcrowding. These include the following:

- **Fast rail connection with Sydney**  
A fast-rail link to Sydney will have a transformational impact on the economy and liveability of the Hunter by bridging the geographical divide between our region and Australia's biggest city and financial centre, providing a viable commuter link for workers travelling in both directions.
- **Newcastle Airport upgrade**  
A terminal upgrade and runway expansion at Newcastle Airport will open new opportunities for trade, tourism, employment and economic investment at this key global gateway. Acting now to strengthen and widen the runway to 'Code E' standard, combined with scheduled Defence maintenance and resurfacing work, will position the airport to accommodate larger, longer-range aircraft, increasing its viability as a destination for airline partners.
- **M1 extension to Raymond Terrace**  
A missing link in the national highway route between Sydney and Brisbane, the M1 extension will vastly improve connectivity on one of the most heavily used corridors for freight in NSW. The 2019-20 federal budget allocated \$1.6 billion to the project.
- **Hunter Freight Rail Bypass**  
A freight rail bypass of Newcastle between Fassifern and Hexham has long been mooted and was previously listed by Infrastructure Australia (July 2017) in its 15-year pipeline of priority infrastructure projects. The bypass would improve productivity of freight transport between Sydney and Newcastle, support future growth plans and separate passenger trains from freight trains. Funds have been allocated by the State Government to investigate and reserve the preferred corridor for the rail line.
- **Port of Newcastle diversification**  
The Port of Newcastle plays a central role in the region's prosperity and its contribution to the regional, state and national economies has grown exponentially over the past decade. Newcastle is the world's leading coal export port and a major driver of the Hunter regional and NSW economy, contributing \$1.8 billion to Gross State Product per annum and generating over 10,000 jobs statewide. It also plays a major role in the NSW freight task.

Diversification will be critical to its continued role as a state and regional economic driver and its effectiveness as a global gateway for trade and tourism, as acknowledged in the Greater Newcastle Metropolitan Plan. The development of a container terminal is a key component of the [Port Master Plan 2040](#), which outlines a range of strategic development opportunities for the next two decades. The Port of

Newcastle maintains that its potential for growth and diversification is constrained by a contractual obligation to pay a financial penalty to the NSW Government for container movements that exceed a specified cap, as set out in the Port Commitment Deeds. This matter is currently the subject of a Federal Court action brought by the [Australian Competition and Consumer Commission](#).

The Chamber, along with the NSW Business Chamber, advocates for the creation of an Infrastructure Coordination Authority to oversee and improve the delivery of infrastructure in regions. We refer the committee to the NSW Business Chamber submission to this inquiry for more information.

**Measures to guide the transition into new industries and employment, including:**

- i. community infrastructure to attract investment and job creation;**
- ii. the need for a public authority to manage the transition;**
- iii. meaningful community consultation to guide the transition; and**
- iv. the role of vocational education providers, including TAFE, in enabling reskilling and retraining;**

ii: The Chamber is open to the concept of an authority, commission or dedicated advocate who could inform policy on economic diversification in regions, like the Hunter, where significant structural readjustment is anticipated in coming decades. Transition to new industries will be a major challenge that requires targeted initiatives and the required focus cannot be achieved simply through the addition of another bureaucratic layer within the structure of government. We see a potentially valuable role for an individual, commissioner or authority who can provide independent expert advice to government, informed by the experiences of communities in economic transition internationally. The Hunter would provide a good pilot region for this process, given its industry mix, scale, past experience with industry restructuring and history of collaboration.

iii. The Chamber believes that consultation with business and industry, as part of the broader community, is essential to effectively guide economic diversification of the region. Consultation should encompass not only new business attraction and investment but also the expansion and continuation of existing industries where the region has strength and competitive advantage.

iv. The Hunter and NSW Business chambers believe vocational education providers have a crucial role in skilling workers for the jobs of the future, whether this be school leavers or workers seeking to retrain in new fields. Our statewide *2019 Workforce Skills Survey* suggests there is a mismatch between the skills young people are obtaining and the skills businesses require, which needs to be urgently addressed to ensure the economy has the requisite skills to sustain existing and future economic activity.

The *2019 Workforce Skills Survey* shows that more than half of businesses in NSW and the Hunter region are experiencing skill shortages. Skills shortages are a significant issue in the

Hunter region, with about 55 per cent of businesses surveyed across the entire region reporting skills shortages. The figure for the Hunter excluding Newcastle was even higher at 64 per cent – the second highest of all regions.

The Chamber has outlined the following measures to help address skill shortages in NSW:

- A doubling of the number of school-based apprenticeships delivered in NSW each year (currently QLD delivers almost four times as many as NSW);
- Industry-based careers advice for students and parents from year 9 for all schools across NSW;
- Increased utilisation of existing TAFE facilities and resources to boost training outcomes.

Policy makers should also look to the success of programs implemented by RDA (Regional Development Australia) Hunter to boost in STEM awareness and education in schools

[RDA Hunter](#) has been designing, creating and implementing STEM initiatives since 2010, designed to encourage higher participation in STEM subjects and activities and skill students for the jobs of the future the programs have reached more than 50,000 students. [RDA Hunter's STEM programs](#) focus on steering students towards future technologies such as 3D design and printing, robotics, unmanned aerial vehicles and embedded systems.

The Chamber believes universities also have an important role to play in addressing skills gaps by providing work-ready graduates for the jobs of the future. We support the direction the University of Newcastle is taking under its Vice-Chancellor, Professor Alex Zelinsky, to strengthen partnerships between education and business industry, including through the construction of a \$200 million STEMM building on the Callaghan campus.

An successful example of this approach is the development by the university of a Bachelor of Aerospace Engineering degree, which had its first intake this year. The program was developed in collaboration with the Australian Defence Force and Joint Strike Fighter partners, including Boeing Australia and BAE Systems Australia, to ensure graduates have the requisite skills to work in this fast-changing industry.

## **Conclusion**

The Hunter Business Chamber appreciates the opportunity to contribute to this inquiry.

Our submission reflects collaborative discussion and correspondence between key Hunter regional organisations in government, industry and the education. These organisations include the City of Newcastle, Hunter Business Chamber, Australian Industry Group, University of Newcastle, Hunter Joint Organisation, Committee for the Hunter, NSW

Department of Industry, RDA Hunter, the Hunter Region Employment Facilitator and Muswellbrook Shire Council.

This submission has identified areas of opportunity to support the economic diversification of the Hunter to ensure the ongoing growth of Australia's leading regional economy. These include the following:

- Government support and funding to grow opportunities in both new areas and industries which the region has strength and advantage;
- Investment in infrastructure to facilitate better connectivity with Sydney, improve the movement of freight and create opportunities in the visitor economy;
- Policies that promote greater collaboration between business and industry and providers of vocational and higher education to ensure that teaching and skills training matches future workforce requirements.

The Hunter Business Chamber appreciates the opportunity to provide these comments and welcomes any further engagement on these matters.

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