



# **NSW Government Submission**

NSW Government submission to Department of  
Infrastructure, Transport, Regional Development,  
Communications and the Arts

*Aviation Green Paper*

November 2023

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# Introduction

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The NSW Government welcomes the opportunity to provide comments to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) Aviation Green Paper (the Green Paper).

Air services – passenger and freight - play a key role in promoting economic activity and economic development across NSW. Regional aviation in particular helps provide communities with access to major cities and services.

This submission outlines responses to key questions in the Green Paper. The NSW Government looks forward to ongoing engagement with the Australian Government as it develops the Aviation White Paper and policy direction for the aviation sector out to 2050.

## Ch 3: Airlines, airports and passengers – competition, consumer protection and disability access settings

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### ***Cabotage arrangements***

*Would the Australian Government’s publication, in consultation with industry, of a decision-making framework and guide for short term cabotage dispensations support clarity of current processes to manage future decisions to implement longer-term cabotage arrangements?*

With airlines focusing more on market niches there is potential for reduced competitiveness in the industry that will disproportionately impact regional areas. Higher transit costs can reduce connectivity between regional areas impacting local economies and critical servicing.

The Green Paper notes that some stakeholders have suggested that the Australian Government consider introducing greater cabotage rights for foreign airlines, allowing them to operate on domestic routes. If foreign airlines expressed an interest in servicing regional connections this may lead to greater regional connectivity and better outcomes for regional communities. The development of a transparent decision-making framework that considers the public benefit, in consultation with the NSW Government, will provide clarity to industry and guide future decisions.

### ***Productivity Commission Inquiry***

*What should the Australian Government take into account in designing the terms of reference for the proposed Productivity Commission Inquiry?*

- Affordability of regional air services – the Productivity Commission should consider the status of domestic airfare pricing and opportunities and barriers influencing the determinants of airfares. In NSW, high regional airfares can leave communities with limited alternatives to travel. Improved airfare affordability would not only boost productivity to the regions but could also reduce the need for long distance car travel.
- Barriers to entry for new regional services – the Productivity Commission should investigate current barriers to entry into service for new airlines, including slot availability and suitability at Sydney Kingsford-Smith Airport for regional services, predatory pricing, capacity dumping practices by incumbent airlines and high cost of entry for regional services.

- Emerging aviation technologies – the Productivity Commission should examine the potential of emerging aviation technologies to improve connectivity to regional communities for the movement of passengers and goods.
- Regional airport operations – the Productivity Commission should investigate mechanisms to support the ongoing economic viability of regional airports and their ability to fund necessary infrastructure upgrades, streamlining regional airport security requirements as well as identify supportive roles to attract airline operators.
- Growth in air freight - the Productivity Commission should consider the expected growth of air freight over the next 50 years and identify issues that may impact the efficiency and productivity of air freight.
- Airport Competition – the Productivity Commission should identify anti-competitive airport practices that could impact the initial growth of Western Sydney International (Nancy-Bird Walton) Airport and its ability to attract airlines.

If progressed, the Inquiry's Terms of Reference should include consultation with the NSW Government, regional communities and industry.

### ***Airline Customer Advocate***

*Would an expanded remit for the Airline Customer Advocate to educate customers on their legal entitlements be useful?*

At present, the Airline Customer Advocate can only hear complaints relating to participating airlines. It cannot issue binding decisions that affect the participating airline's response to complaints, including compelling airlines to pay compensation. Opportunities to support greater awareness and education of consumers on their legal entitlements should be actively encouraged.

### ***Disability access settings***

*What further improvements can be made to the Disability Standards for Accessible Public Transport to accommodate the unique requirements of air travel?*

The NSW Government supports any further improvements to support inclusion and accessibility in the regions. The Australian Government should consider consistent ramp access to aircraft boarding and disembarkation for wheelchair users and/or less mobile passengers where no aerobridge is provided. This is particularly relevant across regional NSW airports. Ramps need to be height adjustable to meet height variations across various aircraft heights.

*What improvements can be made to aviation accessibility that are outside the scope of the Disability Standards for Accessible Public Transport?*

The provision of an aisle wheelchair onboard the aircraft and changing places amenities in all airports including regional airports are examples of improvements to aviation accessibility that are outside the scope of the Disability Standards for Accessible Public Transport.

*What are the specific challenges faced by people with disability wishing to travel by air in regional and remote areas?*

People with disability often have issues with boarding an aircraft via a lift in high winds. This is not permitted and significantly impacts passengers who require wheelchair access, while passengers who board the aircraft via steps are not impacted.

*How can Disability Access Facilitation Plans by airlines and airports be improved?*

- Revision of the Civil Aviation Safety Authority's (CASA) guidelines to provide more consideration to dignified access to air travel. Consultation with people with disability is recommended as part of future revisions.
- Improved disembarkation processes for passengers with disability. Wait times are inconsistent and in some cases, unacceptable.
- Better coordination and resources with airport ground staff is required.
- Wheelchair passengers should have access to any seat in the aircraft not reallocated and should always be able to wheel to the gate in their own personal wheelchair, not an airport aisle chair. Additionally, passengers should have their personal wheelchair waiting for them at the aircraft door upon arrival, not at the baggage claim.
- Greater consistency of accessibility and inclusion across all airports should be considered.

*How should the Aviation Access Forum (AAF) be restructured to be more effective and better able to drive and enforce change to address issues faced by travellers living with disability?*

The AAF should nominate a person with disability to have representation at the forum to be more effective and better able to drive and enforce change to address issues faced by travellers living with disability. The Australian Government should also consider providing a forum update to the NSW Disability Council bi-annually.

## ***Economic Regulation of Australian Airports***

*What measures should be taken to ensure Australian aviation markets operate efficiently, improve competition settings, and deliver optimal consumer outcomes?*

The NSW Government is supportive of any measures the Australian Government could enable to make the aviation industry more competitive.

The Australian Competition and Consumer Commission's report "[Airline competition in Australia](#)" noted that the Australian Government could make legislative and policy changes to enhance airline competition for the benefit of consumers and that the most effective way to do this would be to implement reforms to the way Sydney Kingsford-Smith Airport slots are allocated to airlines. As the Green Paper notes, the Review of the Sydney Airport Demand Management Scheme has already identified various reforms to improve the operation of the scheme.

The Review's 2020 discussion paper noted that the Sydney Airport Slot Management Scheme did not reflect contemporary practices, and the final Review Report, released in February 2021, included several recommendations to drive greater flexibility in managing the regional ring fence (the practice of allocating designated slots for the regional services). The NSW Government supports the growth of regional aviation in NSW and the preservation of the regional ring fence at Sydney Kingsford-Smith Airport. Maintaining the regional ring fence provides an important protection for rural and regional communities access to Sydney Airport – Australia's busiest airport.

## **Ch 4: Regional and remote aviation services**

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### ***Regional and remote engagement***

*Where should the Australian Government focus its engagement in regional and remote aviation, including helping achieve Closing the Gap outcomes, noting established state, territory and local government responsibilities and programs?*

The Australian Government should identify projects that align with either national or state strategies for Closing the Gap. For example, the [2023 Commonwealth Closing the Gap Implementation Plan](#) has a number of targets that could be supported by the aviation industry, such as:

- Provide employment opportunities for Aboriginal and Torres Strait Islander peoples to gain employment within the aviation industry, which addresses stronger economic participation and development of Aboriginal and Torres Strait Islander people and communities (target 8).
- Showcase Aboriginal and Torres Strait Islander languages and culture within airport infrastructure when visitors arrive or implement the use of Acknowledgement of Country protocols when visitors land/arrive (target 16).

The NSW Government would welcome the opportunity to work with the Australian Government to inform future engagement on this matter, particularly in relation to addressing Closing the Gap targets.

### **Current structure for intra-state subsidies**

*Traditionally, subsidies for intra-state aviation services have been carried by state and territory governments. Does this remain the best structure?*

The commercial airline model operating in NSW has been established by private sector operators, under market conditions, with minimal government input. The NSW Government has provided funding to support subsidised aviation services in regional and remote communities to ensure regional connectivity for residents and workers and access to critical services.

The NSW Government invested \$8 million through the Far North-West Joint Organisation (FNWJO) for subsidised passenger air services to Bourke, Cobar and Walgett/Lightning Ridge, with air routes operated by Air Link and FlyPelican. Regular passenger air services had ceased operating to Bourke, Cobar and Walgett in 2018, and the NSW Government recognised the importance of re-establishing regular air services to improve connectivity and accessible services for western NSW.

### **Opportunities for improvement**

More than one-third of the NSW state's population live in the regions. A recent review undertaken by the NSW Government on subsidised air services recommended continued funding based on the value provided by the services in relation to health, childcare, justice, family and community services, with the non-residential workforce underpinning the use of the service. Further analysis is recommended to quantify the economic value of the service, however consideration should be given to how subsidised regional aviation services are supported by government going forward, given their demonstrated value to regional communities and economies.

The NSW Government is supportive of the current Australian Government funding arrangement but would welcome further support for regional and remote communities where services enable access to essential services.

## ***The transition to net zero for regional communities***

### **Opportunities for regional and remote communities**

*What opportunities do emerging aviation technologies present for regional and remote Australia?*

- Improve and re-energise existing connections to regional and remote communities. This could make air travel more economically viable in areas that are currently not serviced, building new connections, due to lower operating costs from electrification and lower physical barriers to operation of technologies like eVTOL. For example, the smaller infrastructure footprint of a vertiport versus building a new runway.
- Enable greater connectivity for people and goods to move around and into regional and rural communities. This could rejuvenate local economies and, in turn, provide new employment and business opportunities. This could also provide new advanced manufacturing and technology sector growth in these communities, drawing skilled labour to these areas and encouraging local workforce training and upskilling to meet the new demand.
- Emerging aviation technologies present an opportunity to reduce reliance on fuel sources that are a barrier to increasing the frequency of regional flights, in turn contributing to Net Zero by 2050 targets and increase community resilience by providing safe access to communities that are isolated due to natural disasters.

### **Challenges faced by regional and remote aviation sector to decarbonise**

*What are specific issues experienced by the regional and remote aviation sector in the context of decarbonisation? What elements should the Transport and Infrastructure Net Zero Roadmap and Action Plan include to recognise the specific circumstances of the regional and remote aviation sector?*

The sector may struggle to find financially viable and sustainable ways to decarbonise due to the smaller scale demand of their communities and high operating costs. The sector may also struggle to attract the expertise and investment that is required to build and deploy decarbonisation technologies and strategies. The vast nature of Australia may also leave remote communities out of scope for many key decarbonisation strategies and technology opportunities, due to the distance from city centres and manufacturing hubs.

The Transport and Infrastructure Net Zero Roadmap and Action Plan should include the specific needs of regional and remote communities in the scope and analysis. This could include identifying key travel routes and hubs where decarbonisation technologies and strategies can be trialled and scaled up to support the surrounding communities. The Plan could also consider opportunities for workforce skills uplift in regional and remote communities to support the rollout and development of decarbonisation technologies.

### **Domestic bioenergy feedstock production**

*What opportunities are there to develop domestic bioenergy feedstock production and collection in Australia's regions, and what policy settings from Government would support this?*

There are large volumes of biomass residues currently under-utilised in many Australian regional areas. There are also large areas of less productive, degraded land which could be suitable for growing biomass crops to support a growing bioeconomy while providing job opportunities for the regions.

The Australian Government could consider introducing temporary incentives to foster the development of a biomass feedstock industry in the period before it is commercially viable without government support. For example, providing support for demonstration projects such as a comparison of mobile plants to collect and process biomass with centralised processing hubs, policy initiatives that provide incentives for landholders to sell their under-utilised



biomass, incentives for landholders to grow biomass and incentives for project developers to invest in bioenergy projects.

*What are the challenges faced by regional and remote aviation and airports posed by our changing climate?*

Regional communities in NSW have faced numerous challenges in recent years with airports being impacted from natural disasters. There is a need to consider incorporating betterment principles in the repair, construction and operation of airports and airstrips, including key connectivity routes (such as roads), to ensure issues of remoteness are not exacerbated with increasing natural disasters, including flooding and bushfires.

The Australian Government should also consider the capacity and capability of regional and remote councils that own and operate airstrips and airports and what level of government support may be required to undertake critical mitigation works to better prepare these assets for future climatic events.

## **Ch 5: Maximising aviation's contribution to net zero**

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### ***Working with industry to support net zero targets***

*How can Government work with industry to ensure a strong and sustainable aviation sector that supports emissions reduction targets while growing jobs and innovation?*

The Australian Government should consider further incentives and support to facilitate the development of low-carbon technology. For example, the Australian Government should work with industry (especially through facilitation of novel technology development) to consider large international opportunities to produce Sustainable Aviation Fuel (SAF). This has significant potential to contribute to domestic reduction of carbon emissions.

*Given there are a number of measures that industry and government could pursue to help achieve net zero by 2050 in aviation, are there specific measures that more emphasis and support should be given to?*

- Support science-based determination of greenhouse gas parameters through systems such as life cycle assessment (LCA) procedures and use these quantitative measures to estimate actual greenhouse gas values for production systems.
- Consider greater support for new propulsion technologies, such as electric and hydrogen powered aviation, as well as supporting charging/refuelling infrastructure and supply. Technology development in those areas have many cross-sector benefits with other modes of transport also being able to use the new supply chains and infrastructure. Support for the decarbonisation of aviation for regional and rural communities supports the broader transport sector, the export market and decarbonisation of other sectors (for example, steel cement, freight, etc.), making it good value for money and supporting the decarbonisation and net zero ambitions of Australia.
- Consider flight alternatives (for example mode shift to electrified rail networks and altering travel patterns) as an important way to reduce the carbon footprint of the aviation sector. This could result in not just making aviation cleaner but reducing the aviation sector's footprint overall.

### ***Net Zero Roadmap and Action Plan***

*What should be included in relation to aviation in the Australian Government's Transport and Infrastructure Net Zero Roadmap and Action Plan (including for sectors, such as GA and airports)?*



- Local technology development and manufacturing to accelerate the adoption of decarbonising aviation technologies.
- Infrastructure upgrades and future proofing of assets to support the adoption of these technologies.
- The overall carbon emissions from infrastructure development and deployment (for example, the construction and running of airports).
- Further collaboration and synergies with adjacent sectors, such as the broader transport sector and the energy sector, to accelerate the development and adoption of decarbonisation technology for the aviation sector.

*How can the Australian Government ensure all emitters in the aviation sector play a role in meeting Australia's emissions reduction targets?*

The Australian Government could consider capturing and reporting the carbon emissions of the different service providers to ensure all emitters in the aviation sector play a role in meeting Australia's emissions reduction targets. For example, through a flexible quantitative market-based system such as a fine-scale Emissions Reduction Fund.

## **Sustainable Aviation Fuel**

*What are the benefits and risks associated with updating the National Greenhouse and Energy Reporting (NGER) scheme and/or other policy mechanisms to enable unique claims on sustainable aviation fuel (SAF) sourced through common infrastructure? How can risks be managed?*

The development of the NGER needs to be adaptable and flexible to encourage development of low carbon emission pathways.

*Should policy and regulatory settings be refined to support development of domestic SAF production capability and industry take-up of SAF?*

The refinement of policy and regulatory settings around SAF production is an important element of the work required to develop domestic production capability. The aviation industry, via the International Air Transport Association (IATA), has committed to achieving net zero emissions. Aviation remains one of the hardest sectors to decarbonise, contributing to approximately 2 per cent of global carbon emissions and 1.5 per cent of Australia's total emissions. For the aviation industry to reach its net zero target, multiple initiatives and technologies will need to be utilised. From modelling undertaken by IATA, on a global scale, switching from conventional jet fuel to SAF will account for 65 per cent of the task of decarbonisation. In Australia this figure is likely to be higher as other technologies are largely not applicable due to our reliance on long distance flights.

Development of a domestic SAF production industry could be beneficial for Australian primary producers as it would create a new market for agricultural residues and forestry products for SAF feedstock.

In addition, SAF facilities can co-produce renewable diesel and a local supply of renewable diesel would provide Australian industries, including those in the agriculture sector, with access to a low emission "drop in" liquid fuel to replace fossil diesel and reduce the emissions of hard to electrify applications such as heavy transport and heavy machinery. Domestic production of renewable diesel would also reduce the serious supply risks associated with Australian industries' dependency on diesel, with about 90 per cent of diesel imported.

The CSIRO has identified two major challenges of the development of SAF; high costs and feedstock availability; and that informing long-term policy frameworks can assist in attracting

investment in the industry.<sup>1</sup> A significant proportion of high-quality feedstocks are currently being exported to markets which have enabling policies and regulations, for example Singapore, USA, Japan and the European Union.

It will be critical to support parallel development of both 'biogenic' (biomass-based) and 'Power to X' production pathways for SAF. Regarding biogenic SAF, there is limited biomass available for renewable fuel production and there will be competition between sectors for this biomass to produce methane, diesel, methanol, LPG and aviation fuel. Biogenic SAF will be critical to start decarbonisation of aviation, but it is highly unlikely it will be scalable to achieve net zero emissions in aviation by 2050. NSW alone consumes about 80 petajoules of aviation fuel and this could increase up to 145 petajoules by 2050 based on the growth rate from CSIRO's Sustainable Aviation Fuel Roadmap. That is higher than NSW's current gas consumption (AEMO Gas Statement of Opportunities 2022).

Accordingly, policy settings should support parallel development of both biogenic and Power to X production pathways. For biogenic production pathways, this includes funding and capital support that targets the aviation sector specifically to overcome cost gaps with fossil-fuel based aviation fuel. For electric production pathways, this includes measures to provide significant on-going revenue support to grow the renewable hydrogen industry and building out renewable electricity generation capacity. Support for the hydrogen industry is a no-regrets action as substantial amounts of hydrogen is needed for the refining process of biogenic SAF anyway (approximately 10 per cent by weight).

It will also be critical to support refining capability, in relation to both skills and infrastructure. Refining capability has been reducing in Australia for some time and the refining requirements will be substantial across Australia to produce the SAF and other renewable fuels domestically that are needed for to achieve the net zero by 2050 target. Production of the crude products that require refining will be dispersed across Australia and within states.

Greater understanding is required of the economics of using the remaining refining facilities in Australia or whether more facilities are needed. Biomass processing and refining capability may need to be dispersed to enable cost effective aggregation of feedstock and crude oil products and production of SAF. Supporting development of refining capability can be achieved through local content rules within different incentivisation mechanisms (for example, mandates, fuel emissions standards or certificate schemes), or through direct funding support as part of a broader policy framework that provides certainty of offtake for SAF.

Certification will be a key enabler for uptake of SAF. Accordingly, the products certified under the Guarantee of Origin scheme should be expanded to include SAF as well as other renewable fuels beyond hydrogen. For the private sector to accelerate uptake, certificate market mechanisms need to be recognised in carbon accounting frameworks and emissions reduction schemes, such as the Safeguard. In consultations on electricity and gas certification by the National GreenPower Program and others, industry has consistently stated that Government is best placed to operate the Guarantee of Origin mechanism. Existing programs like the National GreenPower Accreditation Program can be leveraged for effective and cost-efficient development of SAF certification to ensure sustainability requirements remain best practice as the SAF industry evolves.

*What are the current and future challenges in developing an Australian SAF production industry, including challenges associated with growing, refining and consuming feedstocks?*

- Barriers to enter the market and risk of market failure.
- Commercial viability, high cost when compared with conventional jet fuel.
- Competition for feedstock.

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<sup>1</sup> [Australia's sustainable aviation fuel industry prepares for take-off - CSIRO](#)

- Current policy settings do not support development of domestic SAF.
- Currently there is no social acceptance or licence around the use of SAF.
- Planning and environmental approvals.
- Feedstock negotiations.
- Customer willingness to pay the higher cost for SAF when compared with conventional jet fuel.
- Lack of greenfield development, particularly for pilot initiatives.

Additionally, sustainability of biomass needs to be addressed through existing and appropriate structures and not add extraneous layers of requirements leading to ambiguity of the sustainability of SAF production.

### ***Electric and hydrogen powered aviation***

*How can policy and regulatory settings support research and development and subsequent investment in emerging low and zero emission technologies and related infrastructure?*

- Policy and regulatory settings that provide greater direction for the types of technologies, research and efforts required across the aviation sector to progress towards net zero targets.
- Clearer mandates and requirements for low and zero emissions technology adoption could incentivise investment, support, development and adoption of emerging low and zero emission technologies sooner.
- Macro policy initiatives that focus more broadly on the decarbonisation of transport as a whole, with a consideration of how to decarbonise the aviation sector. This could support the creation of a road map that also considers mode-shift an alternative to flights.
- Develop a quantitative system that is science-based and focused on low carbon development. The current 'green premium' applicable to SAF, that is, the comparative high cost when compared with conventional jet fuel, is identified as the first barrier to production of SAF in Australia. Support for research and development could contribute to technology gains enabling gradual reduction in this price differential.

The NSW Chief Scientist and Engineer undertakes a biennial study to assess the challenges and opportunities associated with meeting emissions targets and adapting to climate change, with a focus on generating economic development, prosperity and jobs growth in NSW. The second Study due to be released in November 2023 identifies a number of opportunities in the transport sector such as SAF. The NSW Government would welcome the opportunity to work with the Australian Government on how this study could inform the Aviation White Paper.

*What information and guidance is needed to support regional aviation's net zero transition in the context of these emerging technologies?*

- Information on the policy and regulation that manage these emerging technologies (for example, CASA guidelines) could provide confidence and clarity on how regional aviation can respond.
- Greater education and awareness of emerging technologies and the opportunities they provide could support the net zero transition of regional aviation.
- Development and integration of industry strategies and roadmaps in overarching net-zero policies, for example, the development of government-guided sectoral plans to support Australia's Net Zero 2050 plan.

- Pro-active industry engagement and guidance by the Net Zero Economy Agency on support available to assist the sector transitioning to net zero.

## Ch 6: Airport development planning processes and consultation mechanisms

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### ***Better coordination of freight on and off airports***

*How can the existing consultation framework be improved to facilitate efficient planning and development, while preventing environmental harm and ensuring continued access for aviation users?*

Freight plays a critical role in driving economic growth, connecting people with essential goods and services, and connecting industry with national and global markets. To enable continued growth, our freight networks and supply chains must become more efficient, reliable and sustainable to meet the growing demands of our communities.

Design and planning that considers optimising networks for high productivity vehicles and targeted investments in infrastructure can support rapid market access and distribution in growing centres and effective connections to and from global gateway cities.

The wider adoption of new and innovative types of vehicles, connected and automated vehicles (CAVs) and low and zero emission vehicles (LZEVs), innovative design combinations for high productivity vehicles, and onboard management technologies, such as telematics, can help to improve the productivity of the road freight sector.

The transport sector can optimise truck movements and reduce emissions per kilometres travelled by using more high productive vehicles designed to move air freight cargo more safely, sustainably and productively. This reduces the exposure to air and noise pollution and improves road safety outcomes. By engaging with industry to understand key freight routes and innovative designs, investment can be targeted to maximise safe, sustainable and productive freight movements.

It is equally important to maintain an adequate supply of appropriately zoned employment lands around the airport. This will be critical in preparing for the considerable forecast growth in aviation and freight, which to operate efficiently will require supporting developments in close proximity to the airport.

Such developments would include freight centres, logistics centres and warehousing, in addition to appropriate vehicle storage/processing and road access. It is important to understand that airports have become part of multi-modal transport hubs, servicing both dedicated freighter aircraft and passenger aircraft. The major airports have invested heavily in the provision of air freight facilities, however, to be functional as effective hubs for both passengers and air freight, airports require efficient and reliable land transport connections.

### ***Curfews at Sydney Airport***

The curfew at Sydney Kingsford-Smith Airport was introduced to minimise the impact of aircraft noise on nearby residents and applies between 11pm and 6am. While most aircraft operations are prohibited during this period, there are provisions for the operation of emergency aircraft, some small jets, propeller-driven aircraft and freight movements.

Section 13 of the *Sydney Airport Curfew Act 1995* (the Act) specifies that British Aerospace 146 type aircraft must be used for freight movements during the curfew period at Sydney Kingsford-Smith Airport. The NSW Government has been advised that these aircraft are obsolete and that production on new aircraft halted in 2001.

Subordinate to the Act, the Sydney Airport Curfew Regulations 1995 (the Regulation) contains a register of specified parties who receive a quota of night-time BAe-146 movements which is prescribed in the Regulation.

This rigid approach to managing noise during curfew periods differs greatly from approaches taken at other Australian airports. For instance, at Adelaide airport it is understood freight aircraft are enabled using an outcomes-based criteria which considers weight and noise levels emitted by the aircraft. There may be opportunities to better regulate noise and enable more modern aircraft to undertake the freight task.

It is premature to make comment around the Environmental Impact Statement for the preliminary flight paths of Western Sydney International (Nancy-Bird Walton) Airport, and corresponding noise amelioration (acquisition and insulation) program.

*Do the current master planning processes support all airport users, including general aviation?*

The NSW Government notes that current master planning processes do not take into consideration all potential airport users. For example, many airports are planned and designed to support the commercial aviation and freight and logistics industries.

As construction progresses, adjacent industries may identify opportunities to build infrastructure on the airport land where they can deliver aviation related services for Australia and the Indo Pacific region. These projects would see significant capital investment into the state/nation and lead to creation of highly skilled jobs.

However, subject to how they are governed, agencies are not always able to consider such opportunities because it is not within their scope or budget. Any variation would require direction from the Australian Government, and provision of the necessary funding for the additional activity, a process which is often complex and lengthy.

If agencies had remit to vary the scope (subject to due diligence and an appropriate business case for additional funding), it would foster an environment that was conducive to maximising inward investment opportunities that have direct benefits to the community.

## **Ch 9: Emerging aviation technologies**

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*How can we build on Australia's strengths to ensure that Australian industry in the sector is able to be competitive internationally?*

Based on the NSW Government's experience of supporting emerging technology development and consultation with the drone industry, the NSW Government recommends that the Australian Government support the aviation sector through funding programs and procurement initiatives. The funding programs should cover all stages of technology readiness with grants for research and development and commercialisation. The procurement initiatives will encourage the adoption of emerging aviation technology. The Australian Government should also lead and collaborate with state and territory governments to create opportunities.

Supporting innovation in emerging aviation technologies will also signal the Australian Government's commitment to the sector and help keep talent in Australia. In addition, promoting careers in the industry and developing a robust talent pipeline will encourage new talent to enter the field and maintain Australia's strengths. The Australian Government should support education and outreach in emerging technologies that underpin drones and advanced air mobility (AAM), such as robotics, artificial intelligence, the internet of things, data analysis, sensing and general aviation.

*How could the Australian Government create an environment that fosters private investment in emerging aviation technologies?*

Through continued and expanded funding in:



- General commercialisation programs (for example, Industry Growth Program, National Reconstruction Fund and Australia's Economic Accelerator).
- Focused/applied programs (for example, Emerging Aviation Technology Partnerships and Advanced Strategic Capabilities Accelerator).
- Challenge programs (for example, Business Research Innovation Initiative) which provide grants to companies solving challenges identified by Australian Government agencies with a view to procuring them.
- Additionally, the Australian Government could revisit incentives to support private investment in these technologies, such as research and development tax incentives and early-stage innovation company (ESIC) tax incentives.

*What skills are needed for the emerging aviation technology sector workforce?*

To help Australia's emerging aviation technology industry grow, the Australian Government needs to build a strong talent pool to meet the industry's workforce needs. In a series of consultations this year, the drone industry told the NSW Government the current skills gap will keep growing unless government invests in skills for operating and innovating emerging aviation technology. This includes:

- Vocational education and training (VET) for operating the technology. This includes training for safe operation of the emerging aviation technology, for example, standardised training and accreditation of drone pilots.
- University education and training for innovation of emerging aviation technology. This includes training in engineering and science programs focusing on emerging technologies that underpin drones and AAM, such as robotics, AI, the internet of things, data analysis, sensing and general aviation.
- Support for placements in the VET and university programs.
- Develop new programs for students to specialise in emerging aviation technology (which will help meet the demand in the sector).
- Investigate and address the leakage of engineering students from joining the engineering workforce.<sup>2</sup>
- Prioritise aviation-related professions for skilled migration programs.
- Develop aftercare linking new skilled migrants to prospective employers.
- Targeted placements for under-represented groups, like women, to address the lack of diversity in the sector.

***Fostering investment in manufacturing new technology***

*How can the Australian Government best work with states and territories to foster a supportive environment for investment in manufacturing of these technologies?*

- Encourage strategic alignment with industry and different levels of government to create an enabling domestic environment for investment.
- Provide financial incentives to best support and encourage the development of emerging aviation technologies, with considered criteria to ensure sustainability and sector-wide benefit.

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<sup>2</sup> [engineersaustralia.org.au/sites/default/files/2022-08/strengthening-engineering-workforce-australia.pdf](https://engineersaustralia.org.au/sites/default/files/2022-08/strengthening-engineering-workforce-australia.pdf)

- Support the coordination of working groups across states and territories and relevant bodies (for example, CASA, airports, Air Services Australia) to encourage collaboration and effective and efficient use of resources.
- Support and expand existing communities of practice (CoP), which promote the sharing of information and coordination of initiatives to avoid duplication and promotion of complementary initiatives. This could be strengthened through the provision of a website so that new entrants can easily access the CoP.

### ***Enabling new technology***

*What regulatory roles in particular do stakeholders see as critical for the Australian Government to lead to enable the advantages of new technologies while managing the risks?*

- Manage competition in the aviation sector to enable emerging aviation technologies while mitigating adverse market and anti-competitive outcomes.
- Regulate the provision of critical services (for example, health, high value and time critical freight, emergency services) that could be impacted by emerging aviation technology to ensure high quality services.
- Manage the safety and maintenance requirements for these technologies.
- Work closely with the industry to support increased testing and operational areas, such as support for regulatory sandboxes. Stakeholders see CASA's role in regulating drones and AAM as critical to enabling the advantages of new technologies. One of the biggest hurdles stakeholders mention in consultation is achieving a proactive synergy between drone regulation and innovation, driving progress with responsible, inventive technology solutions.

### ***Shifting Australian Government Priorities***

*How will priorities of Government agencies need to evolve as the uptake of emerging aviation technologies continues?*

- Consider how emerging aviation technology services integrate with the existing transport sector and communities, which could fundamentally change the way people and goods move.
- Prioritise equity and special needs as the uptake of emerging technologies continues to ensure fairness and optimal social outcomes.
- Prioritise safety considerations as travel patterns, operations and air traffic may change significantly with the introduction of emerging aviation technologies.
- Agencies will also need increased capabilities and knowledge in, for example, drones and AAM, to keep abreast with innovation in emerging aviation technology, both in-house and through engagement with the industry. This will help regulators and policymakers respond to innovation advances in the sector. The Australian Government could create a competent centralised team that can act as a front door to industry and connect them to the relevant agencies where their technology can assist.

*Do Government policies and regulations need to change to better support growth in emerging aviation technology manufacturing?*

Policies and regulations will be key to enabling the testing, certifying and deployment of emerging aviation technologies. Specifically:



- Policy and regulation could provide greater clarity, direction and alignment for how emerging technologies can be integrated safety across the country, and recognition that adjacent sectors such as energy, transport and freight must be considered throughout the development, testing and transition towards emerging aviation technologies.
- Policies need to be adaptive to respond to the opportunities presented by the emergence of new aviation technology manufacturing.
- Growth in emerging aviation technology manufacturing will stem from industry's ability to develop and test products locally and local demand for these new technologies. Government should focus on policies and regulations in the early piloting and R&D stages before investing in large-scale manufacturing.

*How do we achieve a balance between mitigating the negative impacts of drones and Advanced Air Mobility (AAM) while realising the potential benefits?*

The Australian Government can build public goodwill and support for drones and AAM by undertaking early community engagement and education and showcasing their strengths in critical emergencies such as bushfires, floods, and search and rescue, where the benefits to life, environment and property outweigh the negative impacts. There is also a potential need for new research centres covering safety and social licence for drones and AAM with appropriate support from the Australian Government to implement recommendations.

## Ch 10: Future industry workforce

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*How can government policy enable industry to support the net zero economy and the future skills, training, and workforce needs that entails (including future fuels)?*

Policies need to account for future and emerging trends in the aviation sector, including consideration of potential industry incentives for training and education in occupations that will assist with the sector's effort to decarbonise.

Noting that there are current and projected skilled workforce shortages across most industries and occupations, including aviation related skills, it will be important for the Australian and state governments as well as industry to work together and contribute to meeting skill and workforce needs.

*Would an analysis of future skills and workforce needs help position the aviation industry to pre-emptively respond to emerging needs?*

Baseline industry studies, and workforce and skills analysis would assist industry to effectively plan for future workforce needs, including in areas relating to zero emission technologies, future fuels, automation and more advanced digitisation.

For Australia to be competitive internationally, as well as self-sufficient in renewable energy it makes sense to undertake such analysis, including looking at other countries and industries that are more advanced in the renewable sector.

A future skills and workforce needs analysis will also be beneficial for industry and training providers, including TAFEs, to plan for and respond to emerging needs. Where possible, the analysis should include the expected volume of workers and training required and the timeline over which the workforce will be needed.

Information on the aviation workforce supply side, including trends in skilled migration and offshoring/onshoring would also assist in pre-emptively responding to emerging needs.

Disaggregation of skill needs by vocational and higher education levels would also support TAFEs in matching appropriate training options.

*How can government policy enable industry to support the net zero economy and the future skills, training, and workforce needs that entails (including future fuels)?*

Industry and government should work together to identify skills gaps and build new pathways for new entrants into the industry, and to ensure skills of the existing workforce remain current. This begins with school curricula, student work placements, taster experiences, and careers advice through VET and university offerings. Specifically:

- Offering upskilling for current and existing workers within the energy sector in new technologies
- Offering career pathways for school leavers and young academics
- Education in the use of AI in the manufacturing sectors
- Collaborating with states, industry and training providers, including TAFEs, to prepare Australian aviation workforce with skills for new technologies and net zero fuels.
- Greater awareness of aviation careers and career pathways, as well as training options across both vocational and higher education to build a pipeline of locally trained workers and reducing skill shortages. Recognition of lifelong learning and opportunities to engage in on-the-job upskilling will be critical for aviation workers as the uptake of new technologies and net zero fuels increases.
- The 'Future Industry Workforce' chapter of the green paper needs to inform and be informed by the Australian Universities Accord process.

The NSW Government would welcome the opportunity to work with the Australian Government and industry partners to further understand industry needs and employer willingness to co-contribute to training costs, including through access to latest industry equipment and technologies, what form of training is required by industry, when and where they need training, as well as how to support upskilling of workers in new technologies, particularly in areas where the pace of technological transformation is rapid and training on specialised industry equipment/technologies is required.

Australian Government policy can also support the net zero economy by:

- Setting requirements, mandates and targets that will funnel investment and development into emerging decarbonisation technologies.
- Influencing the location and 'hubs' of training, and manufacturing and maintenance to support the workforce requirements in metro, regional and rural communities to enable the net zero economy.
- Providing financial incentives for industries to transition to net zero technologies and specific workforce training.

*What role can reforms to skilled migration pathways play in addressing immediate aviation personnel shortages?*

The Australian Government should work with industry to understand what skills are required and ensure these skills are clearly captured by ANZIC codes. Skilled migration can help Australian industries fill critical skills shortages in the short to medium term. To respond effectively the system will need to understand the current and projected demand of these skills and ensure visas are categorised and apportioned appropriately.

Current policy requires employers to test the Australian Labour Market via three different recruitment platforms to source a suitable candidate, prior to using skilled migration pathways. By reducing this requirement, even as a short-term/pilot measure, it would remove the delay between roles becoming vacant, and being filled.

The Skills Assessment Opportunity for Migrants Pilot is due to end on 29 February 2024. Extending the pilot would offer greater opportunity for migrants who are residing in Australia on a permanent, family, partner, humanitarian or refugee visa continue to receive a free, fast-

tracked skills assessment. This pilot is limited to Aircraft Maintenance Engineers in Avionics, Mechanical and Structures.

*How should governments and industry prepare Australian workers for the new skills required for the technological transition and net zero fuels?*

- Existing process with CASA requires a conversion of international licences to Australian. There is an existing bilateral agreement with New Zealand under Trans-Tasman Mutual Recognition Act 1997, which could serve as an example for other mutual recognition agreements with like countries.
- Governments and industry could begin the development of specific training programs and courses to support the technological transition and net zero fuels for example, skills in novel aircraft technology maintenance.
- Governments and industry could prepare for the transition by laying the foundations necessary for gaining social acceptance for these emerging technologies and growing the social licence and excitement to adopt them as they become more widespread, including the interest to be trained in the industry (for example, case study pilots that have positive outcomes, customer research and analysis).
- The Western Sydney City Deal encapsulates several commitments which seek to focus on skills and training, both relating to the construction of Western Sydney International (Nancy-Bird Walton) Airport, as well as ongoing operations. For example, the NSW Government will establish a permanent VET facility in the Aerotropolis with a focus on construction, aviation and aeronautical-related engineering to support residents of the Western Parkland City to access jobs of the future. Opportunities such as these to further boost skills in aviation and aeronautical related fields could be considered more widely – particularly from a Commonwealth funding perspective.

## Ch 11 – International Aviation

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*Are there other issues or concerns associated with the Australian Government's approach to negotiating aviation bilateral agreements that you wish to highlight?*

*What opportunities exist to improve the approach to international negotiations?*

*Are there problems or potential improvements related to the Australian Government's approach to managing foreign investment in Australian international airlines?*

NSW is the leading destination in Australia, attracting 37 per cent of international short-term arrivals. International markets are expected to grow at a faster rate after the Recovery Phase, which requires NSW to be competitive to appeal for further international demand. Fostering aviation connections with a diverse range of international markets is a crucial element in scaling up NSW's visitor economy.

Destination NSW is the lead Government agency for the NSW tourism and major events sector. Destination NSW supports international connections through the Aviation Attraction Fund, which was a contestable fund available to domestic and international airlines servicing NSW or planning to service NSW. The Aviation Attraction Fund was created to accelerate the state's path to recovery, by building aviation capacity to the state through securing routes to drive significant economic and social benefits through visitor expenditure and job creation.

Based on partnerships contracted to date, it is estimated that routes supported through the Aviation Attraction Fund will generate up to \$708 million in incremental visitor expenditure for the NSW visitor economy, with a potential of up to 1.6 million incremental inbound seats to be made available.

However, industry partners, including airlines and airports, have advised it is increasingly difficult to maintain momentum of growing international visitation with current flight capacity provisions as many markets approach their limit. NSW's core international markets are China, United States, United Kingdom, South Korea, India, New Zealand, Japan, Hong Kong, Taiwan and Singapore. These markets have unlimited capacity for foreign airlines to operate to Sydney Kingsford Smith Airport, with the exception of South Korea and Hong Kong, for which the capacity is almost exhausted.

The NSW Government intends to expand beyond traditional markets and explore opportunities to attract a diverse range of travellers to NSW, which will be challenging with limited flight capacities. Markets that are identified as core or emerging in the NSW Visitor Economy Strategy 2030 are approaching capacity, including Indonesia, Malaysia and Philippines.

The NSW Government supports any examination of individual bilateral agreements that leads to an increase in flight capacities for markets with growing demand. There is an opportunity for Australia to create supply ahead of demand, which is already growing at an exponential rate. By taking this approach and through consideration of bilateral agreements, slot management and air service support, there is an opportunity for existing airports to reach full efficiency potential and create new opportunities for international arrivals. Maintaining the status quo on flight capacities would mean that the NSW visitor economy risks losing potential visitors and expenditure as a typical international air service contributes \$130 million in value to the NSW economy<sup>3</sup>. Increasing or removing flight limits has been successful in attracting more international arrivals, as seen in China's open skies agreement in 2016, which subsequently doubled the number of Chinese arrivals. It would be prudent for the bilateral agreements to reflect emerging demand in key international markets.

The NSW Government supports leveraging existing governmental discussion groups to continue consultation about additional flight capacities for international markets of interest. The NSW Government, through Destination NSW is a member of the Australian Standing Committee on Tourism and supports the NSW Minister for Tourism at Tourism Ministers' Meetings. These groups are well positioned to collectively advise the Commonwealth Transport Minister on matters relating to aviation or bilateral agreements.

As Sydney Kingsford-Smith Airport is currently the only international terminal and gateway for NSW, options to increase international arrivals are developing. These projects include the upgrades for Newcastle Airport runway to receive international flights and the development of Western Sydney International (Nancy-Bird Walton) Airport.

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<sup>3</sup> Sydney Airport's submission to *Inquiry into promoting economic dynamism, competition, and business formation*