

30 November 2023

Mr Jim Betts
Secretary
Department of Infrastructure, Transport, Regional
Development, Communications and the Arts

Aviation Green Paper

Dear Mr Betts,

A proudly Australian company with balance sheet strength, Fortescue is a global leader in large-scale, ultra-efficient and highly complex developments with a proven track record in developing and operating assets in remote and isolated locations. Fortescue has a strong focus on decarbonisation, evidenced by its industry leading target to achieve real-zero carbon emissions across our terrestrial mining operations by 2030. Through our business unit, Fortescue Energy, we are establishing a global portfolio of renewable energy, green hydrogen and derivatives, battery system and green technology projects and operations that are at the forefront of the global energy transition.

Fortescue welcomes the opportunity to provide comment on the Aviation Green Paper to assess the future of the aviation sector for Australia and specifically supports the intent to address the aviation sectors contribution to achieving emissions reductions in the short to medium-term and also its ability to meet Australia's commitment to net-zero emissions by 2050. As a hard to abate sector, aviation will require deep planning and Government commitment to assist industry to decarbonise its operations, while maintaining smooth operations through to 2050.

Fortescue is taking a global approach to the development of our aviation project portfolio. Given the commercial challenges that exist in the nascent industries of green hydrogen production and synthetic Sustainable Aviation Fuel (eSAF) or 'Power to Liquid' (PtL), it is imperative that we focus our attention on geographies that are the most commercially competitive for our early-stage projects. A significant factor in these considerations is the level of support that exists from Governments to support research and development (R&D) and policies that attract capital for projects in their jurisdictions. In July 2023 Fortescue announced our Marsden Point, New Zealand, PtL project with our partners Channel Infrastructure had progressed through to the pre-feasibility phase. This investment has been influenced by positive developments made by the New Zealand Government.

The aviation sector is a critical industry for Australia, supporting jobs across regional and capital cities, tourism both within Australia and abroad. An IATA 2019 report on the value of aviation to Australia



indicated that 5.5% of Australia's GDP was supported by air transport and foreign tourists arriving by air¹. Aviation is also key to Government programs such as defence, with fuel security is particularly important to Australia's sovereign defence forces in land, sea and air. It is critical that domestic production of fuel is available and secure throughout Australia's transition towards net-zero. Fortescue notes that the Commonwealth are busy developing sectoral decarbonisation plans of which one will cover transport and infrastructure, including the aviation sector. We look forward to the development of this plan and providing input through public consultation on its design.

Broadly, Fortescue supports the outlined pathways in the green paper as these pathways cover the major opportunities and options that are available for the sector. Fortescue is specifically interested in the development of PtL fuels to decarbonise aviation fuel supply chains that exist across Australia. With an abundance of wind and solar renewable resources, Australia has the chance to establish itself as a significant PtL producer amid the ongoing energy transition. Given that Australia is a significant consumer of jet fuel with minimal domestic production or refinement, creating a local supply of Sustainable Aviation Fuel (SAF) can enhance energy security and instil confidence in the face of uncertain geopolitics. Beyond this, in the long-term it could become an export opportunity for us leveraging our vast renewable energy resources.

However, the focus on PtL, is not given enough attention and Fortescue suggests needs equal focus to bioSAF to ensure we have a sustainable mix of SAF in the long-term. The green paper rightly notes that there are opportunities to begin to decarbonise aviation fuel in the short-term using Australia's quantities of bio feed stocks to create bioSAF. This pathway will be important to begin the uptake of SAF, build social licence for SAF, entrench new supply chains enabled by the distribution of SAF and achieve early-stage decarbonisation of this critical sector. However, focus and planning must be undertaken concurrently by Government and industrial companies like Fortescue to begin to scale PtL production to be ready to enter the market by the early 2030s as we reach peak capacity of our bio feedstocks during the mid-2030s². As bioSAF relies on Australia's vast but eventually limited feedstocks of organic matter to produce bioSAF, an enduring solution must be progressed in tandem to ensure we have a sustainable supply of long-term decarbonised fuel for the sector. This need is compounded considering the use of bio feedstocks may compete with Australia's food stock production for land, water, and fertilisers (which also must decarbonise) and will also compete for bio feedstocks with other sectors seeking biofuels. Further, it may be more commercially attractive for Australia to export its bio feedstock into nearby international markets placing further risk on the local production of fuels.

To ensure that the PtL sector can begin to develop and scale, it must be supported through the early stages to achieve cost reductions and reach parity with fossil alternatives in the longer term. We recognise that there is funding available through the Australian Renewable Energy Agency (ARENA) to support some

¹ IATA, Importance of air transport to Australia, 2019, available at <https://www.iata.org/en/iata-repository/publications/economic-reports/australia--value-of-aviation/>

²CSIRO, Sustainable aviation fuel opportunities for Australia, 2023, available at <https://www.csiro.au/en/research/technology-space/energy/sustainable-aviation-fuel>



of this work, but the quantum of support is not sufficient to unlock this nascent sector. PtL projects will be highly capital intensive, even through the R&D phase, requiring significant capital and/or operational support from Government to scale technology and establish supply chains. PtL projects are extremely energy intensive and as such a significant portion of the operational costs rest with the procurement of power. It will be difficult for private industry to fund these projects from their balance sheet and revenues from the projects when competing with fossil alternatives are unlikely to cover operating costs. The Commonwealth should consider options to significantly reduce power prices for these projects and also consider options to bridge the commercial gap between PtL and fossil aviation fuels.

Further, the policy and incentive environment for R&D projects in the PtL sector are difficult to access, as the focus of the first ARENA funding grant for SAF (\$30 million, July 2023) has been focused on biofuels, to the exclusion of PtL³. Both bioSAF and PtL require support from the Commonwealth to scale up supply but supporting one type of fuel over the other may cause supply constraints towards the end of the decade. PtL should have its own separate funding programs to support projects looking to deliver industry learnings to the market.

As we approach the 2030s as the PtL sector moves from R&D phase into commercial operation it is likely that it will require further Government support in the form of capital or operational support, much the same as the nascent green hydrogen sector today. As prices for PtL reduce and the market grows, Government can scale back its support, however it will be important that the quantum of fuel available to the aviation sector is sizable enough to bridge the gap between peak bioSAF supply and continuing to decarbonise the supply of aviation fuel. Fortescue welcomes the announcements the Commonwealth has made to date on supporting green hydrogen projects in the form of the Hydrogen Headstart scheme and keenly look forward to the announcement of the next policy iterations of the program. This will assist reducing the price of green hydrogen which is a key input in to PtL, but further support may be required to reach price parity with fossil aviation fuels.

As the paper notes there are several options available to the Commonwealth to support the production of SAF. Fortescue encourages the Commonwealth to consider two pathways.

- Adopt operational revenue support models similar to the approach taken by the Hydrogen Headstart program, emphasising support for the PtL sector to ensure that projects have confidence to invest well ahead of when PtL supply will be required in the 2030s. The most significant barrier for these projects is the high cost of power procurement associated with PtL, representing upwards of 50% of the operational costs. The Commonwealth is taking a number of actions to reduce power prices

³ ARENA, Sustainable Aviation Fuel Funding Initiative, July 2023, available at <https://arena.gov.au/funding/sustainable-aviation-fuel-funding-initiative/>



through increased renewable energy deployments; however it is unclear when these benefits will be felt by consumers. Investment in PtL projects will require long-term revenue support and security.

- Applying a sector mandate to reduce emissions would reduce the competitive disadvantage risk for companies in the aviation sector by requiring that all companies decarbonise together. We note that the Safeguard Mechanism does cover the aviation sector and will support a degree of decarbonisation and SAF fuel uptake. However, the baseline decline rate is only set until 2030 leaving considerable uncertainty for airlines seeking long-term decarbonisation plans. A sector mandate could provide industry certainty to invest in projects that will support long-term SAF supply chains across both the bioSAF and PtL sectors. There are several mandate policy examples internationally covering the aviation sector the Commonwealth can draw from to shape this policy.

It is likely that a combination of both 'carrots' and 'sticks' would best support the progress of the PtL sector. Fortescue would welcome the opportunity to work with the Commonwealth on the above or other policy options the Commonwealth might consider. It is critical that we develop a pipeline of PtL projects over the long-term to supply PtL to the Australian aviation sector to support industry decarbonisation beyond the limits of bioSAF fuel supply.

Thank you for the opportunity to comment on this consultation. If you would like to discuss any of the issues raised in this submission or to arrange a briefing, please contact [REDACTED] or myself on the below details.

Yours sincerely

Manager Government Relations – Energy

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FORTESCUE