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Contact Jacob Snelgrove

Phone 021 420 439

Email jacob.snelgrove@airnz.co.nz

185 Fanshawe Street

Auckland 1010

New Zealand

For the Ministry of Business, Innovation and Employment (energyinfo@mbie.govt.nz)

Submission on the Electricity Demand and Generation Scenarios (EDGS) 2023

- 1 Air New Zealand welcomes the opportunity to submit on the Ministry of Business, Innovation and Employment's (**MBIE**) consultation on the Electricity Demand and Generation Scenarios (**EDGS**) 2023. We agree that the EDGS have an important role to play in developing and assessing Transpower's major investment proposals, as well as supporting regulators, policy makers and electricity industry participants in their planning and decision-making.
- 2 Air New Zealand is Aotearoa's largest domestic and international airline, providing both passenger and cargo transport services in and around Aotearoa and overseas destinations.
- 3 We currently serve 20 domestic network regions, and fly to 30 international ports across Australia, the Pacific Islands, North America and Asia. In FY22, the airline flew more than 8 million passengers, and carried tonnes of exports around the globe and domestically. Before the global pandemic, Air New Zealand's passenger numbers were significantly higher – flying more than 17 million passengers in 2019.
- 4 As the national airline, Air New Zealand has a critical role in the social and economic success of Aotearoa with respect to domestic and international tourism and travel, and export of Aotearoa's products. Aviation connects Aotearoa to the world and is vital to the basic functioning of our economy, our critical infrastructure and our health system. It is necessary for our exporters to distribute high-value goods to the rest of the world and to import the critical goods and services needed to keep our economy running. It ensures that our people can continue to connect with others at home and abroad, and it is fundamental to the ongoing success of our world-class tourism proposition.
- 5 Air New Zealand is also committed to playing its part in the global response to the climate crisis. Our central contribution to that response is the reduction of carbon emissions across our operation, with the goal of reaching net zero carbon emissions by 2050. An interim 2030 science-based carbon reduction target is in place¹ to guide Air New Zealand and hold us to account on this trajectory. Sustainable aviation fuel (comprising biofuel and "power-to-liquid" fuel produced using renewable electricity) and next generation aircraft powered directly by electricity and green hydrogen are critical technologies for reducing our carbon

¹ To reduce carbon intensity by 28.9 percent by 2030, compared to a 2019 baseline. Carbon intensity means the greenhouse gas emissions per Revenue Tonne Kilometre (**RTK**), a measure of passenger and cargo payload carried by Air New Zealand.

emissions. Supporting the development of, and transition to, these technologies is not, however, something that Air New Zealand can accomplish alone. It will require co-ordination across multiple sectors and will be a journey that must be shared with the Government and other stakeholders across the economy.

- 6 Our response to the EDGS consultation is focussed primarily on the demand scenarios MBIE has presented and how they may be affected by the decarbonisation of aviation.
- 7 Although the four demand scenarios presented are internally consistent, it appears that the major lever affecting electricity demand from transport in the scenarios is electric vehicle uptake. The scenarios do not appear to properly anticipate electricity demand from the aviation sector.
- 8 Given Air New Zealand's decarbonisation ambitions outlined above, we believe that the reference, growth and/or innovation scenarios should consider demand growth potential from direct electric and/or green hydrogen aviation.¹ Whilst such technologies are currently in their infancy, they will make significant strides over the coming decades to 2050 and may have large demand footprints that the electricity sector should understand and recognise.
- 9 We recognise that the forthcoming release of MBIE's interim Hydrogen Roadmap will also have a bearing on the 2023 EDGS. As an energy-intensive and hard-to-abate sector likely to be reliant on hydrogen (including hydrogen derivatives) for decarbonisation, we trust that the Hydrogen Roadmap will consider the needs of the aviation sector in Aotearoa.
- 10 We would be pleased to discuss our own energy demand modelling with MBIE to aid the development of the EDGS and/or the Hydrogen Roadmap. Please contact Jacob Snelgrove (jacob.snelgrove@airnz.co.nz) for further information.



Kiri Hannifin
Chief Sustainability Officer

¹ For example, the reference scenario could contemplate a relatively modest level of domestic aviation decarbonisation whilst the growth and innovation scenarios could consider higher levels of domestic aviation decarbonisation and even some electricity demand growth from international aviation.