



Renewables, Climate & Future Industries (ReCFIT)
Department of State Growth
via email: climatechange@recfit.tas.gov.au

5 December 2023

RE: Metro Tasmania submission to Renewables, Climate and Future Industries Tasmania's Emission Reduction and Resilience Plan – Transport Consultation Draft Report

Metro Tasmania is a state-owned company and is the largest Tasmanian-owned passenger transport service provider. Metro is delivering approximately seven million passenger journeys and over nine million kilometres a year on a fleet of 230 buses in and around Hobart, Launceston and Burnie, driven and supported by over 500 employees.

Metro's greenhouse gas emissions for 2021/22 was 13,355 tonnes CO_{2-e}, which is predominantly attributable to the operation of Metro's current exclusively diesel bus fleet. Significant opportunities exist to substantially reduce Metro's greenhouse gas emissions through the use of zero emission bus technologies.

Metro has been funded by the Tasmanian Government, through Renewables, Climate and Energy Futures Tasmania, to deliver Zero Emission Bus (ZEB) Trials for two different technologies, including \$6 million for a Battery Electric Bus (BEB) Trial and up to \$11.3 million for a hydrogen Fuel Cell Electric Bus (FCEB) Trial.

The BEB Trial will involve the operation of four BEBs across Metro's Launceston network for a two year period, with the buses due to arrive in December 2023. The BEBs will be charged overnight using dedicated fast chargers installed at Metro's Launceston Depot.

The FCEB Trial will involve the operation of three FCEBs across Metro's Hobart network, with the Trial due to commence in mid-2024 for a three year period. A dedicated Hydrogen Refuelling Station (HRS) will be installed as part of the Trial at Metro's Mornington Depot. It is intended that green hydrogen will be purchased from the Blue Economy CRC, who are installing an electrolyser in Lutana, with hydrogen transported to the Mornington Depot via hydrogen tube trailers.

Both the BEB and FCEB Trials will be powered by Tasmania's net 100 per cent renewable electricity, with direct connection to the electricity network to power the battery chargers for the BEB Trial, and through powering the electrolyser to produce green hydrogen.

A key objective of the ZEB Trials for Metro is to provide operational learnings that will help inform a future transition of Metro's fleet to zero emission technologies. Data will be collected throughout the Trials which will enable operational and socio-economic analysis to be carried out to help identify which technology types are best suited, and in what configurations, to the varying operational conditions experienced across Metro's networks.



The ZEB Trials provide an important opportunity to test existing regulatory frameworks and identify where regulatory reforms may be required. This is particularly valuable for the FCEB Trial due to the nascent state of development of the hydrogen industry. Given the ZEB Trials are among the first zero emission heavy vehicle projects in Tasmania, they are providing valuable experience for our regulatory agencies (such as Consumer, Building and Occupational Services within the Department of Justice) and first responder agencies (such as the Tasmania Fire Service) which will assist with future projects across the sector.

The ZEB Trials also provide an opportunity for skills development and training. Metro staff will be trained in the operation and basic maintenance of the ZEBs, and have the opportunity to observe and learn about specialised repairs and maintenance activities. Implementing the ZEB Trials has helped facilitate TasTAFE working with industry to develop and deliver short training courses related to the safe operation and basic maintenance (non-specialised) of FCEBs. The demand for further skills development and training, that provides more specialised skills in the maintenance of zero emission heavy vehicles and the operation and maintenance of associated technologies such as chargers and hydrogen refuellers, is expected to escalate as the uptake of zero emission vehicles increases. Such training should be tailored toward both upskilling existing technicians (such as diesel mechanics) as well as training new technicians. Metro considers this could form an important component of the 'future opportunity' stated in the consultation draft to "Continue to explore opportunities for new dual trade-based training courses related to EVs for electrical and mechanical automotive technicians and apprentices".

Gaining social licence will be key to the successful broader adoption of zero emission vehicle technologies. A focus of the ZEB Trials will be to educate and inform both Metro passengers and the general public on the benefits and safety aspects of zero emission vehicles. Exposure to the Trials will also assist in gaining social licence from Metro staff, including bus operators and maintenance staff.

While the ZEB Trials will provide valuable information regarding a future transition of Metro's fleet to ZEBs, there will be further work required to inform this transition. For example, an important 'future opportunity' will be to understand the power requirements for larger scale roll-outs of ZEBs and the viability of greenfield vs brownfield (existing) depot developments. This could be an expansion of the 'future opportunity' stated in the consultation draft to "Explore the future requirements for heavy vehicle charging infrastructure in Tasmania to inform decision making".

Sufficient capacity from the electricity distribution network is available for the BEB Trial at the Launceston Depot, however upgrades would be required to support the operation of any significantly increased number of BEBs. The cost of network upgrades associated with BEB roll-outs is proving to be one of the significant challenges faced by bus service providers in other jurisdictions, and often greenfield BEB depot developments in stronger parts of the electricity distribution network are more feasible than upgrading the network connection to an existing depot. In regard to FCEBs, the power needs for refuelling FCEBs at a depot will be substantially lower than the power required at a depot to charge BEBs (assuming the hydrogen is produced elsewhere).

In regard to building on the outcomes of the ZEB Trials, and other associated work such as understanding power requirements for larger scale roll-outs of ZEBs, an additional 'future opportunity' could be to explore



opportunities to transition Metro's fleet to zero emission buses, based on the findings and learnings from the ZEB Trial and associated activities.

Metro is supportive of the priority areas and future opportunities outlined in the consultation draft, and welcomes the opportunity to make a submission.

Yours sincerely

A handwritten signature in blue ink that reads "Katie Cooper". The signature is written in a cursive, flowing style.

Katie Cooper
Chief Executive Officer