

**Submission  
No 8**

## **EMISSION FREE MODES OF PUBLIC TRANSPORT**

**Organisation:** Austal

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Tim James MP  
Committee Chair  
Legislative Assembly Committee on Transport and Infrastructure  
Parliament of NSW  
Parliament House  
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Dear Tim

***RE: Make a submission - Inquiry into Emission Free Modes of Public Transport***

Thank you for inviting Austal to provide a submission to your enquiry into Emission Free Modes of Public Transport in NSW. The threat of global warming is resulting in international regulatory and policy changes heralding a transition to modes of public transport that are better for the planet, our communities and business.

We believe electric powered ferries represent the future of commercial maritime transport, offering operators a cost-effective vessel capable of zero emissions, lower operating costs, a quieter and more comfortable ride and outstanding reliability.

Austal has been developing its new VOLTA series of passenger ferries as part of continuing research and development into emerging propulsion technologies aimed at delivering zero emission marine solutions globally. The VOLTA series is distinct from existing, electric-powered vessels in the marketplace by going beyond the replacement of diesel engines with an electric (battery) power plant, to offer a completely integrated design, construction and support solution.

The following initial points are made in response to the Committee inquiry terms of reference:

**a) the capacity and capability for industry to provide emission free modes of public transport**

- For more than three decades Austal has been at the forefront of high-speed craft design, technology, construction and sustainment, delivering 340 ships to 121 operators in 59 countries. The company's VOLTA Passenger Express series draws upon this vast experience and expertise and has been developed to meet market demands for electric powered vessels with greater passenger capacity, higher speeds and a reduced carbon footprint.
- With an existing shipbuilding capability operating in Henderson WA, the company is ready to construct new electric-powered solutions based on our IACS (International Association of Classification Societies) approved Volta 46V, 43V and 32V designs or a bespoke design unique to your requirements. These electric ferries are ideal for any inland waterway service operating within high population urban environments, designed for fast loading and unloading of passengers and rapid battery charging, to minimise wasted time docked at the terminal.
- The Austal VOLTA turnkey package options include an optimised fleet/vessel design, shore side charging equipment, in-service support and customised financing solutions.

#### **b) benefits and costs to taxpayers**

- *Less impact on health and environment:* zero emission ferries help reduce diesel particulates improving the health of the Sydney population (using a case study route between Manly and Circular Key VOLTA is estimated to save 113 litres of diesel and 315 kg of CO2 emissions per trip).
- *Passenger Safety and Comfort:* an electric ferry generates no fumes and significantly reduces engine noise and vibration. The Austal VOLTA series combines state-of-the-art electric drive and battery technology with a lightweight, low-resistance hull form for increased passenger comfort.
- *Economic benefits from lower cost of ownership and increased vessel availability:* electricity costs are 25-70% less than diesel plus less maintenance spend. For diesel ferries around 70% of availability issues are due to engine and fuel system problems.

#### **c) the opportunities for, and impact to, local manufacturing operations**

- Austal currently has a \$220M annual spend across 1,433 Australian Suppliers, of which 87% are Small to Medium Enterprises in manufacturing. 16% of these suppliers are in NSW, with 184 businesses providing \$10.3m of goods and services into Austal products, for example Capral Aluminium Industrial Solutions operates two manufacturing plants in NSW capable of supplying aluminium for an Austal VOLTA build program.
- Austal has a national presence with shipyards and service centres in Perth, Darwin, Cairns and Brisbane however would be able to complete the systems integration of electric ferries in NSW prior to vessel handover to maximise opportunities for local manufacturing operations.

#### **d) other jurisdictions that have emission free modes of public transport**

Presently there are very few fully electric high speed ferry fleets in operation globally. Europe, in particular Norway, are the market leaders in the diesel-electric hybrid ferry space accounting for over 60% of the global fleet, however Austal's VOLTA designs pave the way beyond hybrid technology with pure electric propulsion systems with zero-emissions.

#### **e) any other related matters**

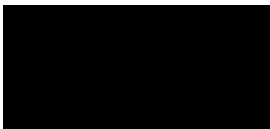
- Austal can also provide input into the inquiry on the combined capital and operating expenditure of assets and infrastructure required to establish the electric ferry service. The VOLTA turnkey package options include optimised fleet/vessel design along with shore side charging equipment, in service support and financing the transition to the electric fleet.

Further to the points above I attach a presentation 'Beyond Electric' detailing a sustainable maritime transportation solution for your consideration. The presentation expands on the benefits of making the transition to electric and explains how Austal can offer guidance and solutions to achieve zero emission marine public transport in NSW.

Further information on the VOLTA advantage can also be found at <https://volta.austal.com/>.

Austal welcomes the opportunity to make a contribution to this crucial inquiry and we look forward to discussing the above with you in more detail at your earliest convenience.

Yours sincerely



**Patrick Gregg**

Chief Executive Officer

**Enclosures:**

Attachment A: VOLTA Presentation for Parliament of NSW