

16 September 2022

Our Ref: PB2217

Legislative Assembly Committee on Transport and Infrastructure
 Parliament of New South Wales
 by email: transportinfrastructure@parliament.nsw.gov.au

Dear Legislative Assembly Committee,

Response to Supplementary Questions: Emission Free Modes of Public Transport

Birdon is pleased to provide the following responses to supplementary questions arising from the Public Hearing into Emission Free Modes of Public Transport, of 19 August 2022, relating to ferries.

1. Can you provide some general comparisons between diesel-powered and hybrid ferries, in terms of emissions reductions and their ability to service routes in NSW?

Hybrid ferries have a role to play in the transition of the Sydney Ferries to an emission-free transport service, as they allow for the achievement of emission reductions while the infrastructure for charging is installed across the harbour without impacting current timetables and routes. The benefits of a hybrid ferry over a diesel-powered ferry are summarised below and include an emission reduction of 30%.

	Diesel / Electric Hybrid Ferry
Diesel Fuel Savings	30%-50% route dependent
Diesel Engine Maintenance Savings	75%
Direct CO ₂ Reduction	30%+

It is also possible to upgrade a new-build hybrid ferry or upgraded hybrid ferry to fully electric, once infrastructure for charging is available.

- a. Can you estimate the cost of converting an existing diesel-powered ferry to a hybrid engine?
- b. How would this compare to converting a diesel-powered ferry to fully-electric?

Birdon has examined the cost of converting the existing River-Class Ferry to a hybrid or fully electric program. Our analysis demonstrates that there are significant environmental benefits in the adoption of electric technology for ferries converted from the existing fleet.

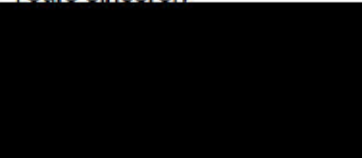
The cost of converting an existing River-Class diesel-powered ferry to hybrid is estimated to be approximately \$2M, without impacting route or timetables.

The cost of converting an existing River-Class diesel-powered ferry to fully electric is estimated to start at \$2.5M, dependent upon route and timetable.

The Hybrid Upgrade includes all of the technology of the fully electric option, but with onboard charging and redundancy. With this option, no additional shoreside infrastructure is required, and it reduces the requirement for the most evolving and expensive technology – the batteries. This option enables a simple transition from hybrid to electric once battery technology is more mature and affordable, and once shoreside infrastructure is available.

We would be pleased to provide any further information that may assist with the Inquiry.

Yours sincerely



Terri Benson
Managing Director

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