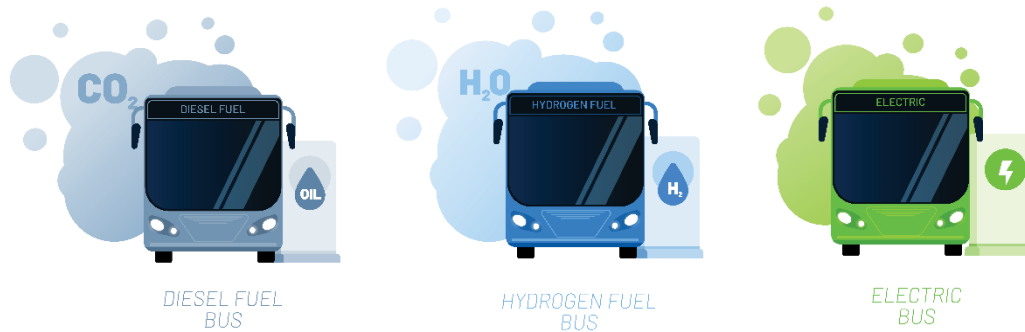


### Metro Tasmania Zero Emission Bus (ZEB) Trial Bulletin October 2022

Welcome to the second bulletin about the Metro Tasmania – Zero Emission Bus (ZEB) Trial. In this bulletin we provide an overview of a Battery Electric Bus (BEB) and how it works.



#### What is a BEB and how does it work?

- In many ways a BEB is similar to a diesel bus, with the key difference being the way it is powered. A BEB uses an electric motor rather than an internal combustion engine with the energy coming from on-board batteries.
- The BEB batteries are charged by connecting to dedicated battery chargers. For the trial BEB charging will occur overnight in Metro's Launceston Depot.
- The range of a BEB depends on a combination of the capacity of the batteries (measured in kWh) and the energy efficiency of the BEB (kWh/km). It is expected the range of the BEBs in the trial will be sufficient to cover a typical full day's use across the Launceston network.
- Regenerative braking is a key feature of BEBs, where energy from braking puts charge back into the batteries. This typically returns about a third of energy consumed during driving to the battery, significantly improving the energy efficiency of a BEB.
- While operating a BEB is similar in many ways to a diesel bus, the way it is operated can influence its performance, particularly in regard to getting the most out of regenerative braking. Dedicated operator training will help optimise BEB performance and ensure it is safely operated.
- Operating conditions such as hilliness of the terrain and temperature will also influence the performance and efficiency of a BEB. For example, more energy is needed on colder days to heat the bus and keep passengers (and bus operators!) warm.
- The trial will investigate how the BEBs perform over the full range of operating conditions experienced across the Launceston network. It will also provide valuable insights, for example in regard to BEB maintenance and training requirements.

Keep an eye out for the next bulletin which will provide an overview of battery chargers.