

#### TR Group Ltd

#### Decarbonisation







## Introduction



- 30 year old Privately owned NZ company
- Specialise in renting and leasing heavy vehicles
- 8500 heavy vehicles across NZ & Australia
- A firm belief in values, culture, and doing the right thing
- Doing the right thing when it comes to climate change is being part of the solution – not waiting for the future to come to us



### **Current Actions**



- In conjunction with 'like-minded' customers we are trialing no emission vehicle technologies
- Learn the limitations and the advantages
- Support the development
- Help support the support industries and infrastructure
- Open to any and all ideas/concepts/partnerships



# Electric Trucks



- 50 trucks in work or on order
- Beautiful driving experience smooth, quiet, plenty of torque
- Reliable and cheap to run no diesel, no RUC's at present
- Best of all, zero emission
- BUT they have limitations
  - They are still too expensive
  - Heavy
  - Limited range
  - Extended refueling times
  - Infrastructure the biggest of all!!







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# Hydrogen Fuel Cell Trucks

- 23 trucks on order so far
- Same driving experience quiet, smooth, lots of torque
- Lighter than BEV, but still heavier than an ICE
- Longer range
- Refueling similar to a diesel
- Refueling infrastructure coming
- It solves the electricity dilemma
- Only emission is water vapour
- BUT -
- Currently too expensive to buy
- Still a bit unproven
- Efficiency
- Dimensional challenges with tanks



# What is the future?

- Is it hydrogen or electric? it is both!
  - The tech exists now, the focus is on getting to mass production and product refinement
  - Electricity generation and distribution is a big issue still
- Do we need to go from where we are straight to zero emission trucks? What could we do now that is affordable?
  - Euro 6 trucks 95% less emissions than Euro 3
  - Focus on fuel efficiency 1 litre of diesel burned = 2.68KG of carbon dioxide emitted
  - Cars and light commercials

