ASX Announcement

23 November 2021

Lion at a glance

- ASX listed oil and gas company with conventional PSC's in Indonesia.
- Focus on conventional oil and gas production and development, appraisal and step out exploration risk opportunities.
- Exploring green hydrogen opportunities in Australia.
- Net production of around 37bopd from the Seram PSC which also contains the 1.5TCF Lofin gas/condensate discovery.
- Leveraging synergies in conventional assets and access to both infrastructure and markets.
- Executive team and strategic investors with impressive track records for value creation in Asia.

Contact

Lion Energy Limited
ABN 51 000 753 640
ASX Code: LIO

Suite 1
295 Rokeby Road
Subiaco WA 6008
Australia

Tel +61 8 9211 1500 | Fax +61 8 9211 1501
info@lionenergy.com.au
www.lionenergy.com.au

Directors & Officers

Tom Soulsby	Executive Chairman
Damien Servant	Executive Director
Russell Brimage	Non-Executive Director
Chris Newton	Non-Executive Director
Zane Lewis	Non-Executive Director
Arron Canicais	Company Secretary

For more information contact

Tom Soulsby
+61 487 527 958
tsoulsby@lionenergy.com.au

Lion firms up its green hydrogen strategy

Key highlights

- **State governments are driving zero-emission transition through regulatory measures and pledges largely by 2025**
- **Lion is focusing on helping the heavy mobility sector (buses then trucks) comply with these ambitious targets**
- **Hydrogen refuelling infrastructure is a key component of the transition, but is currently lagging**
- **Lion, together with its partners, envisions building and operating a network of hydrogen production hubs and refuelling stations**
- **Lion is working closely with equipment suppliers, bus manufacturers and fleet operators to open its first hydrogen refuelling station**

Following its 4 October 2021 announcement ("Update on green hydrogen roadmap"), and our recent release re our capital raising ("Lion receives firm commitments for $9.6m") dated 17 November, 2021 , Lion Energy Limited ("Lion" or "Company"; ASX: LIO) is pleased to provide further details on its green hydrogen plans.

As previously announced, Lion is focusing its initial efforts on the production and delivery of green hydrogen for the domestic heavy mobility market, in particular public buses. To that effect, Lion has signed multiple partnerships with hydrogen refueling equipment suppliers, bus fleet operators and bus suppliers to position itself at the forefront of the opportunity.

Mr Tom Soulsby, Lion's Executive Chairman, said "*we are very pleased by the industry's response to our plans. Hydrogen buses are coming to Australia, but the refuelling infrastructure is still missing. Lion and its partners are working hard on filling the gaps and we are working full steam ahead on putting in place a hub and spoke strategy designed to problem solve issues bus fleet operators have in transitioning to zero emission vehicles. The updated pack attached highlights these plans.*"

The Company cautions that there can be no certainty that a suitable hydrogen opportunity will be identified as a result of this work. Further, there can be no certainty that any conditions precedent to progressing such an opportunity (including, without limitation, compliance with ASX Listing Rules 11.1.2 and/or 11.1.3 to the extent applicable) will be satisfied. ENDS

This ASX announcement was approved and authorised for release by the Board of Directors.

Market update: Lion firms up its Green Hydrogen strategy

November 2021

LION H2energy

Lion moving closer to first hydrogen refuelling station

1. State governments are driving zero-emission transition through regulatory measures and pledges
2. Lion is focusing on helping the heavy mobility sector (buses then trucks) comply with ambitious targets
3. Hydrogen refuelling infrastructure is a key component of the transition, but is currently lagging
4. Lion, together with its partners, envisions building and operating a network of hydrogen production hubs and refuelling stations
5. Lion is working closely with equipment suppliers, bus manufacturers and fleet operators with a view to open its first refuelling station

Lion has established hydrogen value chain partnerships

Censtar

WAGNER CORPORATION

BLK AUTO

GPA ENGINEERING

LION H2energy

Hydrogen city bus manufacturers – overseas/local

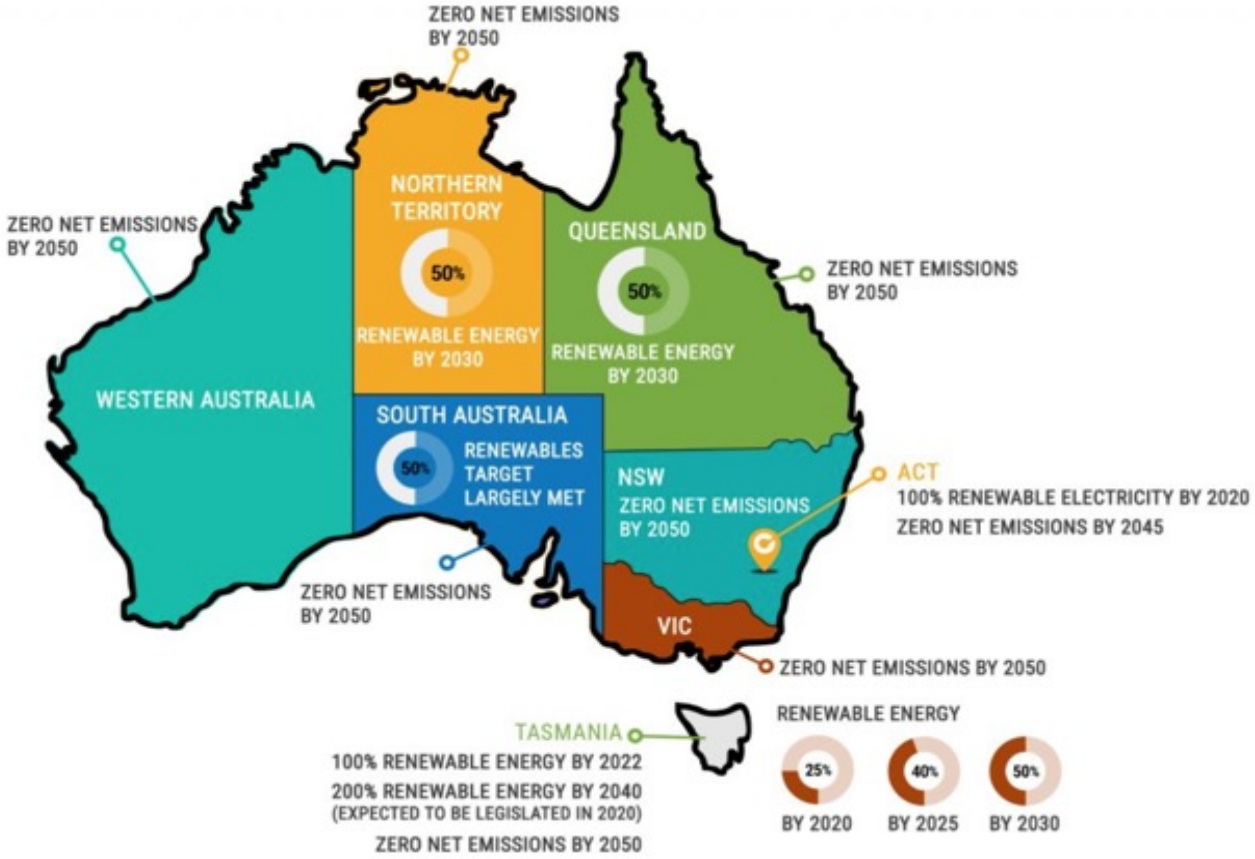
Bus fleet operators in Qld, NSW and Vic

States governments are leading the zero-emission charge

"*The Morrison Government will act in a practical, responsible way to deliver net zero emissions by 2050 while preserving Australian jobs and generating new opportunities for industries and regional Australia*." Oct 26, 2021

On a combined basis, all states have net zero emission targets by 2050

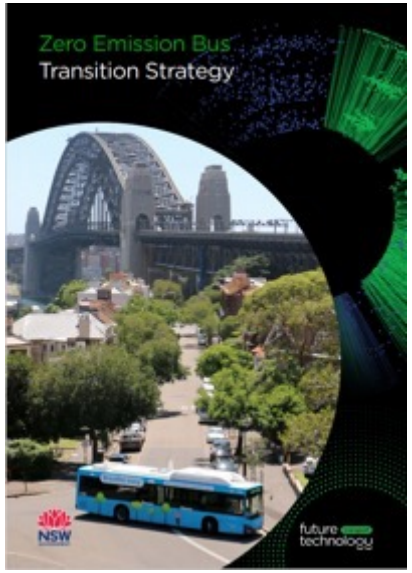
Green hydrogen considered key element of zero emission goals



Source: 100percentrenewables.com, https://www.minister.industry.gov.au/ministers/taylor/media-releases/australias-plan-reach-our-net-zero-target-2050

The public bus sector is under transition to zero-emission pressure

- While buses account for a small proportion of $C0_2$ emission, governments have more direct influence on this sector as bus procurement is effectively funded through bus service contracts.
- Transport for NSW (TfNSW) seeks a total replacement of the public bus fleet by zero-emissions buses (ZEB) by 2030.
- Queensland Government committed that every new urban bus added to the fleet in South-East Queensland will be zero-emissions by 2025, followed by state-wide mandate by 2030.
- Victorian Government has pledged that all new bus purchases will be zero emission buses from 2025.
- The aggressive cut-off date for ZEB is driving bus fleet operators to quickly embrace battery and hydrogen technologies.



Hydrogen buses are a proven technology and are coming to Australia

- Hydrogen buses are already in operation in many countries, with Europe and China leading the growth.
- Multiple hydrogen bus vendors ensure growing competition:
  - Europe - Van Hool, Wrightbus, Solaris, Caetano, Rampini, Safra, & Daimler.
  - Asia - Toyota, Hyundai, Weichai, Foton, Yutong & Higer…
  - US - Cummins, New Flyer, Hyzon…
- In China alone, more than 10 hydrogen bus manufacturers. Competition is driving prices down quickly.
- Australia's bus operators have started to review hydrogen solutions, in addition to battery electric buses (BEV).
- In October 2021, BLK/Hyzon unveiled Australia's first hydrogen powered coach, a significant milestone in the nation's adoption of zero-emission vehicles.
- The back-to-base model of buses is highly suitable for long-term offtake arrangements between fleet operators and hydrogen producers/distributors.

Australia's first hydrogen coach, from specialist vehicle importer and distributor BLK Auto, in partnership with Hyzon Motors.

Left-hand drive version of the city bus Foton Mobility intends to import and then make in Australia.

Australia slated to follow Europe/China adopting hydrogen buses

Hydrogen buses fleets in Europe

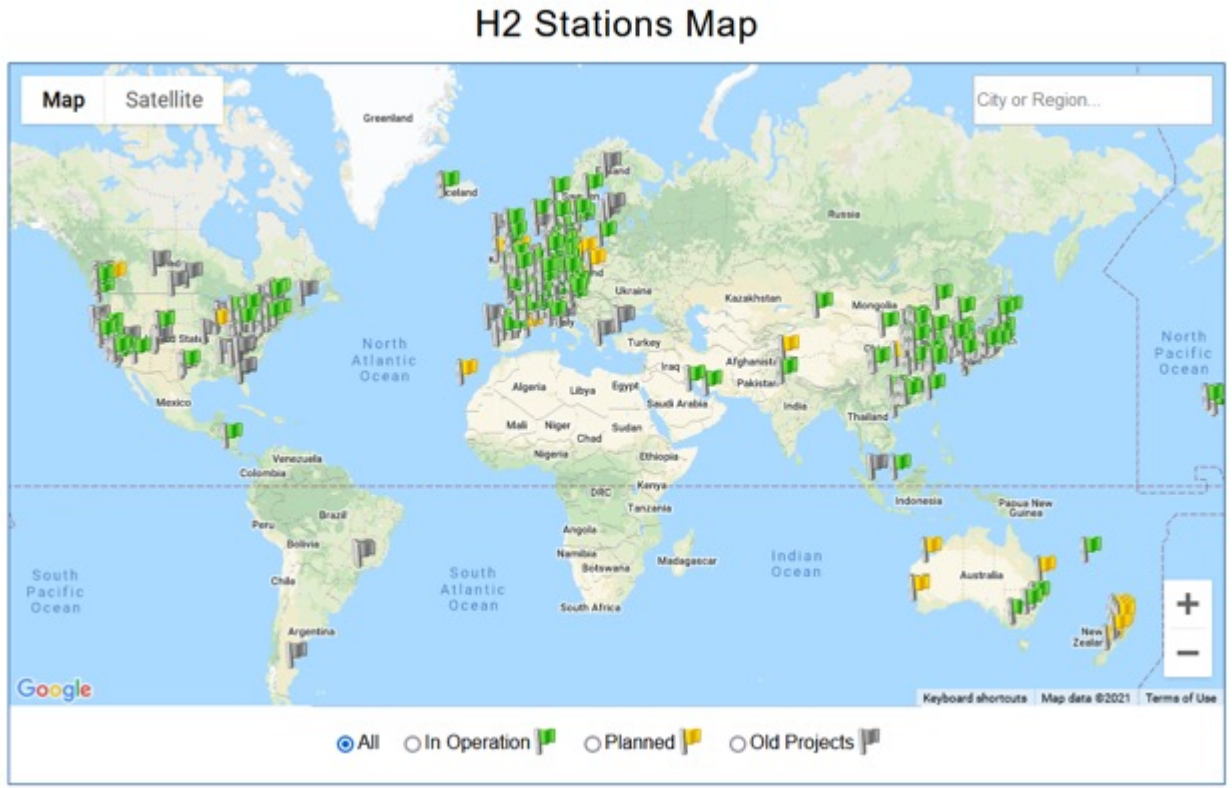
Source: Waterstofnet, Hydrogen Europe

Van Hool hydrogen bus in Pau, France

Source: Van Hool

Hydrogen refuelling stations worldwide – Australia significantly lagging

- Europe and China are developing infrastructure at a rapid pace
- China's first hydrogen station opened in 2017. There are now in excess of 115 stations and more than 1,000 are planned by 2025
- Australia's rollout is formative. Currently, there are only two hydrogen refuellers open to specialist fleets (Melbourne and Canberra). Hyundai also has a hydrogen refuelling point behind its Sydney headquarters (however not open to the public).
- Unless addressed, the lack of hydrogen refueling infrastructure will constrain the adoption of hydrogen as a fuel replacement.



Source: H2stations.org by LBST

Hydrogen compares favourable against battery vehicles for Australian bus operators

- Hydrogen buses refuelling time (5-10min) is significantly less than BEV recharging time (up to 6-8hrs). BEV fleets require extra buses to compensate for the charging time.
- BEVs typically charge at night, when electricity price is high and renewable electricity is significantly less available.
- BEVs require significant additional infrastructure (e.g. 1 charging point for 1-2 buses) and access to large electrical capacity.

Example of BEV charging infrastructure in Krayot, Israel

- Australian bus depots are usually located in areas with limited space and low power capacity, making them unable to easily accommodate infrastructure required for BEVs fleet
- With hydrogen, operators can replace diesel buses with minimal changes to existing depots and route schedules:
  - Diesel like refuelling times mean operators can replace diesel buses with hydrogen buses with no change to routes and schedules
  - On depot hydrogen dispensing equipment occupy smaller footprint and require lower power requirement

Bus depots constraints favour hydrogen adoptions as a zero-emission technology

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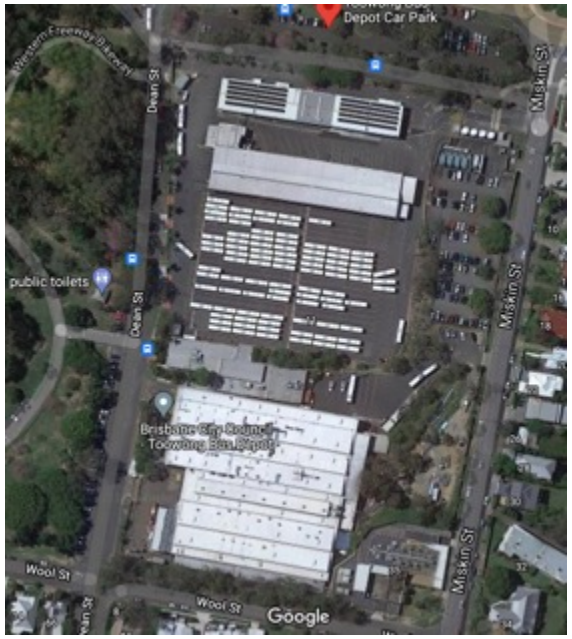
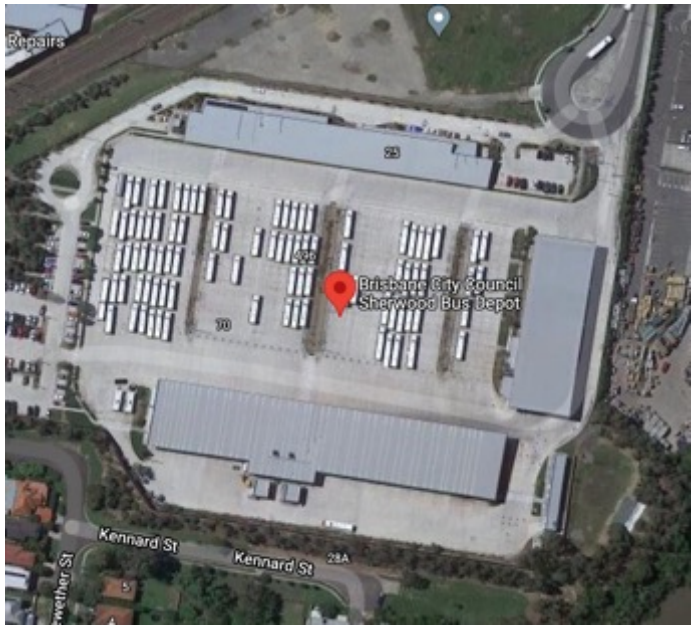


Sherwood



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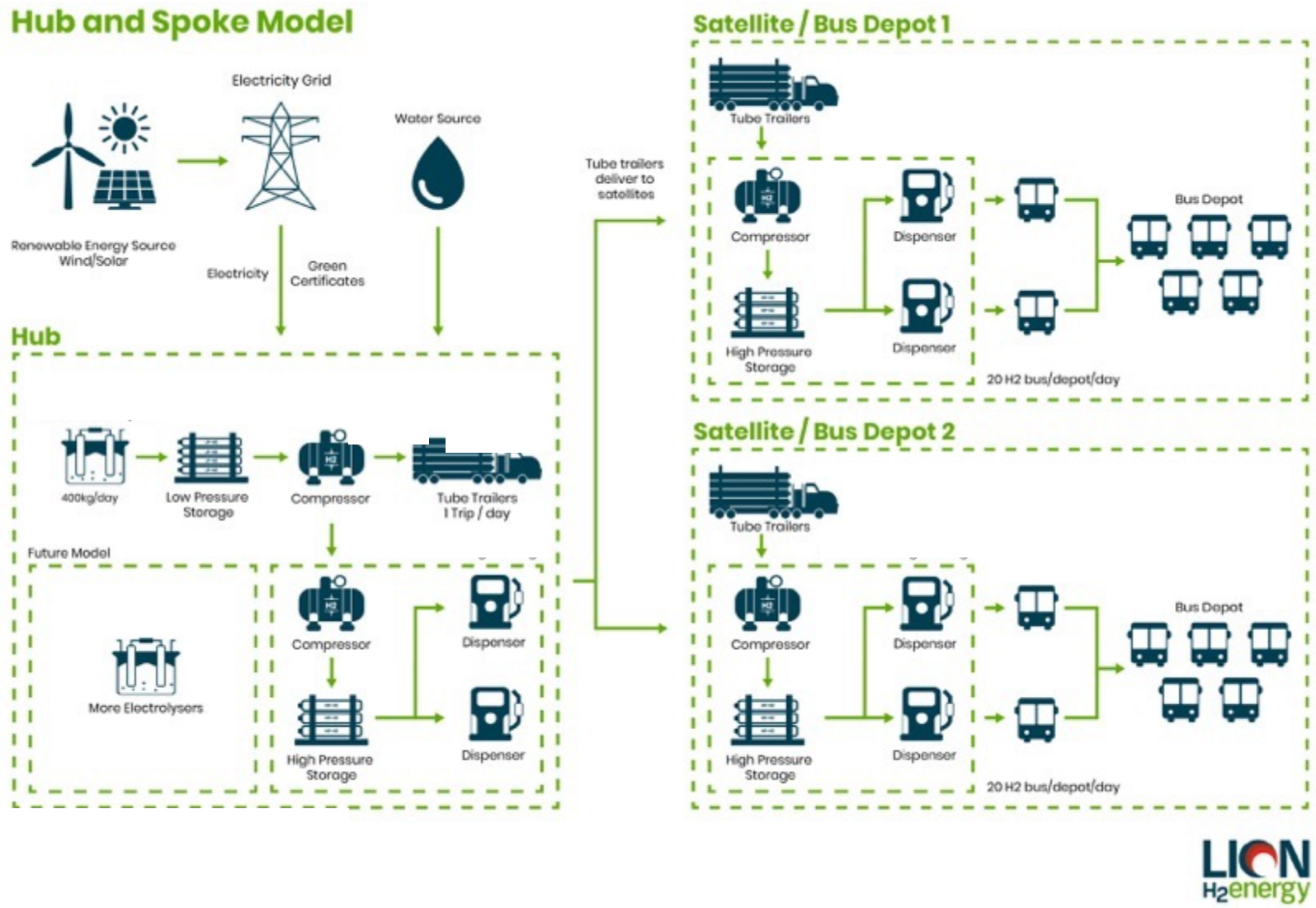
- Currently bus depots have no existing BEV recharging points. In most cases, electricity capacity a problem.
- Depots and schedules are built and designed around onsite high-speed diesel refuelling.
- Onsite Hydrogen refuelling infrastructure can closely resemble the existing diesel refuelling kit.
- Hydrogen refuelling equipment can fit into a small footprint.

Depot space and power constraints driving the Lion hub and spoke model



Hubs located in areas with land and power available

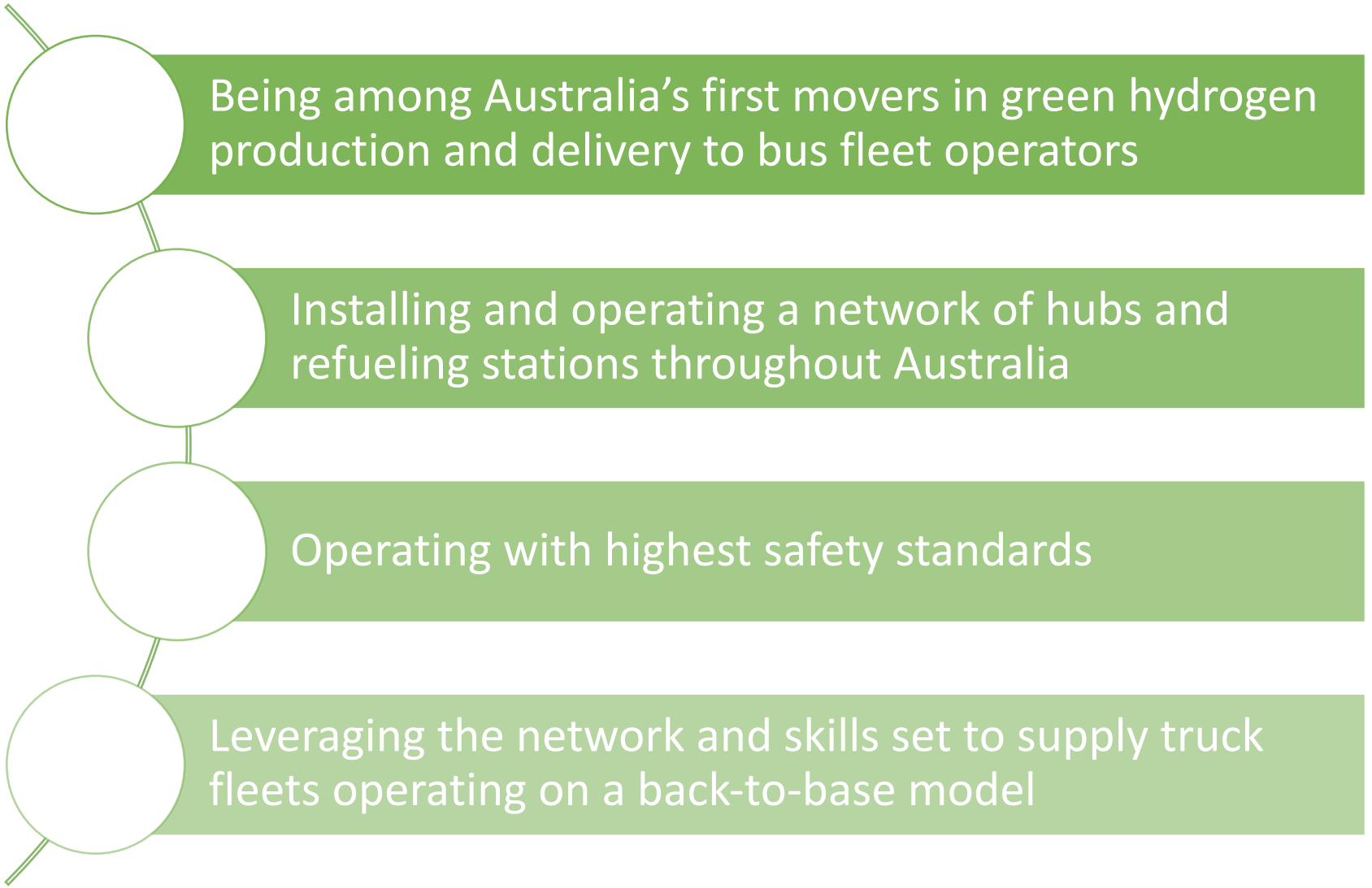
Lion's concept design of a hydrogen production hub with collocated refueling facilities

Modular refuelling spoke infrastructure

- Small modular footprint on depot and minimizes depot capex
- Fast installation, minimizing depot disruption for bus operators
- Capable of 500kg per day, fast refueling speeds
- Hydrogen is delivered from Hub on tubular trailers
- Spokes can be added with ease

Source: Fueltech Hydrogen Pty Ltd, Censtar's local partner

Lion’s green hydrogen vision



Thank you

For more information please contact:

Tom Soulsby
Executive Chairman
tsoulsby@lionenergy.com.au

Damien Servant
Executive Director
dservant@lionenergy.com.au