



# COUNTRYWIDE RENEWABLE HYDROGEN

Hydrogen from renewables for a  
sustainable future



# About Countrywide Renewable Hydrogen



- Australian-based company originating and developing projects in Australia and North America
- Becoming part of ASX-listed company, ReNu Energy Limited
- Project development based on six pillars for bankability
- A key pillar is offtakes – no customers, no project
- Work closely with governments at all levels to secure their support to develop a hydrogen economy
- Projects begin as domestic supply opportunities with exports to follow when viable
- Domestic demand development is a public education exercise
- Demonstrate how renewable hydrogen will play a key role in nations achieving their emissions reduction targets
- Currently three projects in Australia, two proposed for Canada and one in USA.

# CRH's Project Pillars for Bankability



- ✓ Guarantee of origin renewable electricity, targeting 24/7 availability at an acceptable price
- ✓ Hydrogen or hydrogen derivative offtakes
- ✓ Access to clean water
- ✓ Land available near a deep-water port for export projects
- ✓ Positive approvals environment
- ✓ Government funding to support a project



# CRH Projects –Tasmania, CRH-Tas



- Abundant renewable energy resources, hydro and wind
- Supportive state Government
- Domestic offtake targets in mobility, natural gas blending, remote power generation, materials handling and industrial heating
- Indicative funding support from Australian Renewable Energy Agency
- 10MW to start with expansion opportunities when the export market matures



# Melbourne Hydrogen Hub Project



- Initial baseline offtakes of 90 fuel cell buses operated by three public transport bus companies, natural gas blending and materials handling
- Grid-sourced renewable energy with a goal to optimise capacity
- Initial project target size of 10-12MW electrolyser, potential to scale up as domestic demand increases
- Collaboration with leading international gas company, BOC
- Renewable hydrogen production opens the door to numerous complementary “hub” opportunities including:
  - on-site refueller for buses, trucks
  - a new fuel cell bus manufacturing plant
  - fuel cell vehicle servicing/maintenance
  - education facility for hydrogen and fuel cell technicians



**MELBOURNE  
HYDROGEN  
HUB**



# CRH Projects – Portland, CRH-Port



- Strategically located – wind farm corridor, infrastructure including deep-water port, electricity network, supportive municipality
- Quality water supply - high rainfall zone + ground water
- Ammonia ( $\text{NH}_3$ ) production potential from renewable hydrogen
- Potential for green fertiliser production for the “green triangle” agricultural zone of SW Victoria and SE South Australia
- Offtake targets – domestic diesel displacement in heavy mobility and future export phase as ammonia to Japan & Korea
- HOA with top 100 ASX project partner to be announced



# Renewable energy mix for CRH



- Target opportunities to secure electricity for electrolysers from renewable sources with the highest capacity factor – 1. hydro 2. wind 3. solar
- PPA from existing projects or build new generation sites
- Investigating opportunities for hydrogen production from municipal waste
- Landfill is a major environmental issue in parts of Australia
- Landfill sites are full or close to full so options are needed now
- Potential to use proven technologies that are emission-free and do not involve incineration
- Hydrogen production costs from waste are attractive and solve an environmental issue
- International energy agencies include waste as a renewable energy source



# **COUNTRYWIDE**

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