



Global Energy Ventures

Compressed Hydrogen

Enabling the path to decarbonisation

Compression | Simplicity | Efficiency

Singapore Roadshow

28 March 2022

ASX.GEV

www.gev.com

Important Notice and Disclaimer

This presentation and these materials (together the “Presentation”) have been prepared by Global Energy Ventures Limited ABN 53 109 213 470 (ASX:GEV) (“GEV”) as a summary of GEV’s operations and results for the purposes of a presentation to existing or potential investors in GEV. By participating in this Presentation or reviewing or retaining these materials, you acknowledge and represent that you have read, understood and accepted the terms of this Important Notice and Disclaimer.

This Presentation should be read in conjunction with GEV’s 30 June 2021 Annual Report lodged with the Australian Securities Exchange (“ASX”) on 26 August 2021 and other periodic and continuous disclosure announcements that have been lodged by GEV with the ASX.

This Presentation may contain forward looking statements concerning projected costs, approval timelines, construction timelines, earnings, revenue, growth, outlook or other matters (“Projections”). Any such Projections are based on assumptions which may differ materially from the actual circumstances which may arise and actual results may vary materially from Projections. You should not place undue reliance on any Projections, which are based only on current expectations and the information available to GEV. The expectations reflected in such Projections are currently considered by GEV to be reasonable, but they may be affected by a range of variables that could cause actual results or trends to differ materially, including but not limited to: price and currency fluctuations, the ability to obtain reliable gas or hydrogen supply, gas reserve estimates, the ability to locate markets for CNG or hydrogen, fluctuations in gas and hydrogen prices, project site latent conditions, approvals and cost estimates, development progress, operating results, legislative, fiscal and regulatory developments, and economic and financial markets conditions, including availability of financing.

GEV undertakes no obligation to update any Projections for events or circumstances that occur subsequent to the date of this Presentation or to keep current any of the information provided, except to the extent required by law.

This Presentation is not a disclosure document, is for information purposes only, should not be used as the basis for making investment decisions or other decisions in relation to GEV or its securities, and does not constitute an offer to issue, or arrange to issue, securities or other financial products. This Presentation has been prepared without taking into account the investment objectives, financial situation or particular needs of any particular person. You should consult your own advisors as to legal, tax, financial and related matters and conduct your own investigations, enquiries and analysis concerning any transaction or investment or other decision in relation to GEV.

This Presentation, including opinions set out in it, is based on information compiled or prepared by GEV from sources believed to be reliable, although such information has not been verified in all instances. GEV has no obligation to tell recipients if it becomes aware of any inaccuracy in or omission from the information in this Presentation. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this Presentation. To the maximum extent permitted by law, none of GEV, its directors, employees, advisors or agents, nor any other person, accepts any liability, including without limitation any liability arising out of fault or negligence, for any loss arising from the use of the information contained in this Presentation. In particular, no representation or warranty, express or implied, is given as to the accuracy, completeness, likelihood of achievement or reasonableness of any forecasts, Projections or prospects referred to in this Presentation.

No distribution in United States or other jurisdictions outside Australia

This Presentation does not constitute an offer or recommendation to purchase or sell any securities in any jurisdiction, nor an invitation to apply for such securities in any jurisdiction, and will not form part of any contract for the acquisition of securities in GEV. This Presentation does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States. Any securities described in this Presentation have not been, and will not be, registered under the US Securities Act of 1933, as amended (“Securities Act”) or the securities laws of any state or other jurisdiction of the United States and may not be offered or sold in the United States except in transactions exempt from, or not subject to, registration under the Securities Act and applicable US state securities laws. This Presentation may not be released to US wire services or distributed in the United States.

The distribution of this Presentation in other jurisdictions outside Australia may also be restricted by law and any such restrictions should be observed. Any failure to comply with such restrictions may constitute a violation of applicable securities laws. By accepting this Presentation you represent and warrant that you are entitled to receive such Presentation in accordance with applicable laws.

Non-IFRS Financial Information

This Presentation may use non-IFRS financial information. Non-IFRS measures have not been subject to audit or review. Certain of these measures may not be comparable to similarly titled measures of other companies and should not be construed as an alternative to other financial measures determined in accordance with Australian accounting standards.

§ refers to Australian Dollars unless otherwise indicated.

This presentation was authorised by the CEO for release on 25 March 2022



Global Energy Ventures (GEV) is making the future of green hydrogen accessible through the simplicity and efficiency of compressed hydrogen.

Our **mission** is to become a leading developer of integrated green hydrogen projects.

Board & Management

Australian company with energy infrastructure, utilities, ship newbuilds, operations, and capital markets



Martin Carolan
Managing Director &
Chief Executive Officer
(SYDNEY)

*Commercial & Capital
Markets*



Garry Triglavcanin
Executive Director
& Chief Development
Officer (PERTH)

*Engineer, LNG, Project
Development*



Greg Martin
Non-Executive
Chairman (SYDNEY)

*Business Leader, Energy,
Infrastructure, Governance*



Andrew Pickering
Non-executive Director
(SYDNEY)

*Shipping, Newbuilds,
Tankers, LNG*



David Palmer
Non-Executive Director
(SINGAPORE)

*Shipping, Commercial,
Financing*



Norman Marshall
Commercial Manager
(PERTH)

*Legal, Commercial,
Project Finance*



Per Roed
Chief Technical Officer
(ROTTERDAM)

*Newbuilds, Tankers, LNG,
Ports, Operations*



Mats Fagerber
Commercial Advisor
(LISBON)

*Commercial, LNG,
Infrastructure, Shipbroking*



Luke Velterop
H2 Development
(PERTH)

Project Development



Dave Stenning
Ship Development &
Approvals (CALGARY)

*Ship Design, Class
Approvals, Commercial*



John Fitzpatrick
Naval Architect &
Inventor (CALGARY)

*Ship Design, Class
Approvals*



Emma Connor
Chief Financial
Officer (PERTH)

Accounting, Finance

Developing a portfolio of integrated **green hydrogen** projects, leveraging innovative compressed shipping IP to be first to market

Value creation through innovative IP and projects with a focus on 'simplicity and efficiency'. Focus on project origination, development, construction and operations.

Upstream Hydrogen Production

- > Origination of integrated hydrogen export projects for regional export markets using compression
- > Project development leverages benefits of compression
- > **2.8 GW Tiwi H2 Project announced in October 2021 (Tiwi Islands, NT)**
 - > Closest export port location to Asian markets
 - > Brownfield development opportunity, no native title, low environmental impact
 - > Traditional owner and NT Government support
 - > Phased development to benefit from ongoing capex/opex cost reductions & growth in offtake markets
- > **Commercial, technical and financial partners will be introduced at the right time to maximise value to GEV shareholders.**

Midstream Hydrogen Transport

- > Collaboration with bankable green hydrogen developers seeking a regional export solution
- > **HyEnergy Project announced in August 2021**
 - > Large-scale 8 GW Project
 - > Located on the Gascoyne Coastline, WA
 - > Partner includes global energy major with access to customers
 - > GEV supported by WA Government funding for its feasibility
- > **Screening continues on a global portfolio of opportunities that are suitable for compressed hydrogen transport**



Ship Engineering & Approvals

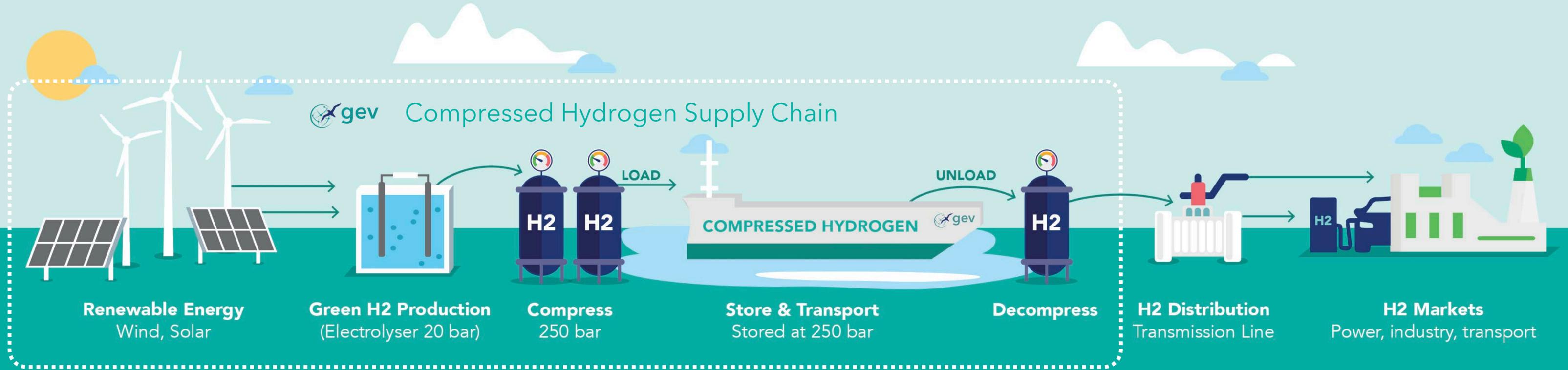
- > In-house team with +20yrs with experience in innovative design for bulk-scale gas carrier solutions
- > **Proprietary GH2 Carrier** under development with AIP for two capacity carriers by ABS.
- > **Final Class Approvals for ship construction in 2023**
- > **Technical partners include: Wartsila, Ballard Power Systems, APL/NOV**
- > Patent IP portfolio, complementing our Patents for compressed natural gas in shipping (CNG Optimum)
- > Integration with onshore and offshore loading, unloading and mooring systems





Fundamentals for Compressed Hydrogen

Compression provides a simple and energy efficient supply chain for green hydrogen



3 stages for a 'pipe to pipe' hydrogen supply chain

1. COMPRESS / LOAD

Hydrogen gas from the electrolyser to 250 bar operating pressure of the ship

2. STORE / TRANSPORT

In its pure gas form, with an electric propulsion solution allowing for flexibility in power generation and fuels consumed, including hybrid.

3. UNLOAD / DECOMPRESS

Deliver into a grid/pipeline using the ship's pressure, with minor scavenging to drawdown pressure

Advantages of Compression:

- > **Proven application of compression** to deliver green hydrogen at a competitive cost
- > **Commercial at low volumes** - does not require economy of scale
- > **Small footprint** compared to hydrogen liquefaction and/or ammonia facilities enables 'plug and play' deployment model for new markets
- > **Minimises storage** requirements for hydrogen and batteries
- > **Flexibility in loading** via onshore berth facilities or offshore buoy systems
- > **Modular development** aligns with market growth

Compression provides first mover advantage for bulk marine hydrogen export

- > Compression is a **proven, safe and reliable method of storing hydrogen** – currently used for onshore applications at pressures up to 700 bar
- > **Zero carbon shipping solution** through an electric propulsion system that allows for full flexibility in fuels for power generation, including hybrid (battery) integration
- > **Simple, energy efficient and competitive (LCOH)** to regional markets up to 4,000 nautical miles
- > **Stores, transports & delivers hydrogen in high purity gaseous form**
 - > Minimal technical barriers
 - > Avoids the energy and capital-intensive processes to convert hydrogen to a liquid or chemical state
- > **AIP Class Approval** demonstrates there are no risks that would prevent the ultimate classification of the vessel
- > **First commercial scale hydrogen exports by 2026**

WARTSILÄ
Wartsila electric propulsion, hybrid & **Ballard** Fuel Cell systems

BALLARD

Bulk hydrogen storage at **250 bar operating pressure**

Proprietary IP with **US Patent filed** on tank design

Manoeuvring capability tailored to operating requirements, including **offshore loading**

Approval In Principle confirms no risks to prevent successful development

Two GH2 Carriers under development
120,000 m³ (AIP received)
26,000 m³ (AIP received)

ABS

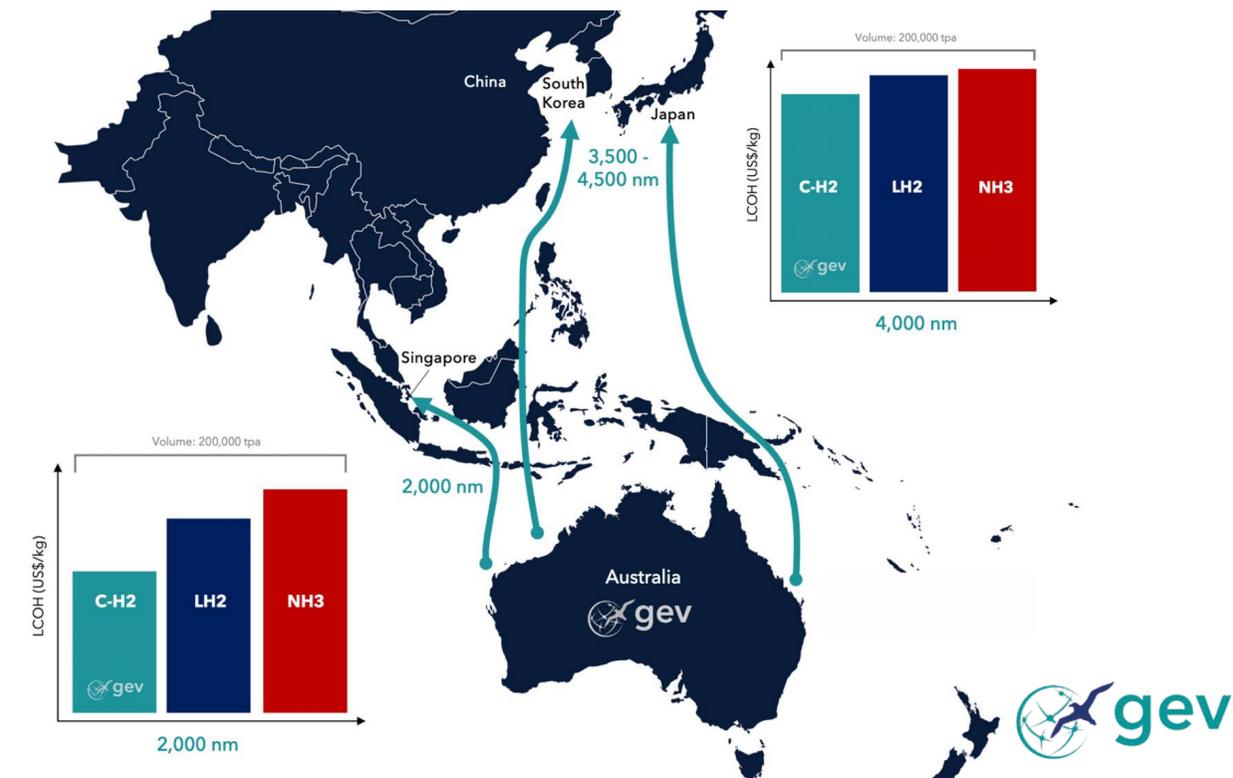
Clarksons
Clarksons Platou Ship Broker

Scoping Study confirmed compression delivers a competitive delivered cost with zero emissions

100% green supply chain analysis for hydrogen

Export volumes of 50,000 to 400,00 tpa

Market distances of 2,000 to 4,000 n.m.

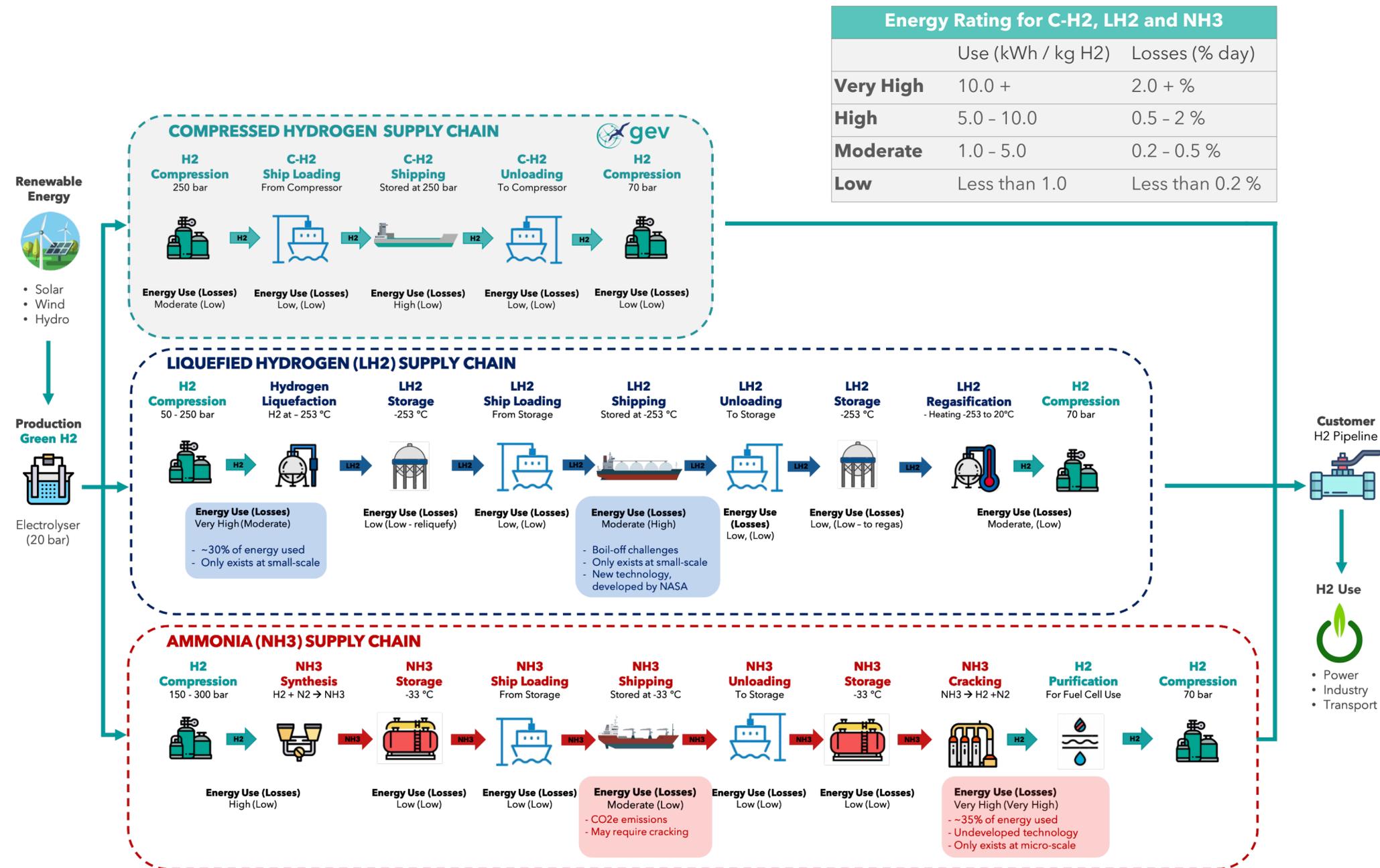


Supply chain efficiency has significant impact on delivered cost

Key findings - GEV Scoping Study, March 2021

- › Compression is integral to all three supply chains to increase the volumetric energy density of H2
- › Compression has minimal technical barriers, with ship classification approvals being key
- › LH2 supply chain is significantly more complex with additional energy intensive processes as well as onshore storage requirements
- › NH3 supply chain uses predominately mature and well-developed technologies. However, if the end user requires high purity hydrogen, then technical barriers and energy penalty to crack and purify (reconversion)

Compression is the most energy efficient solution for delivery of green hydrogen over regional distances given it removes cost and energy penalties of conversion and reconversion

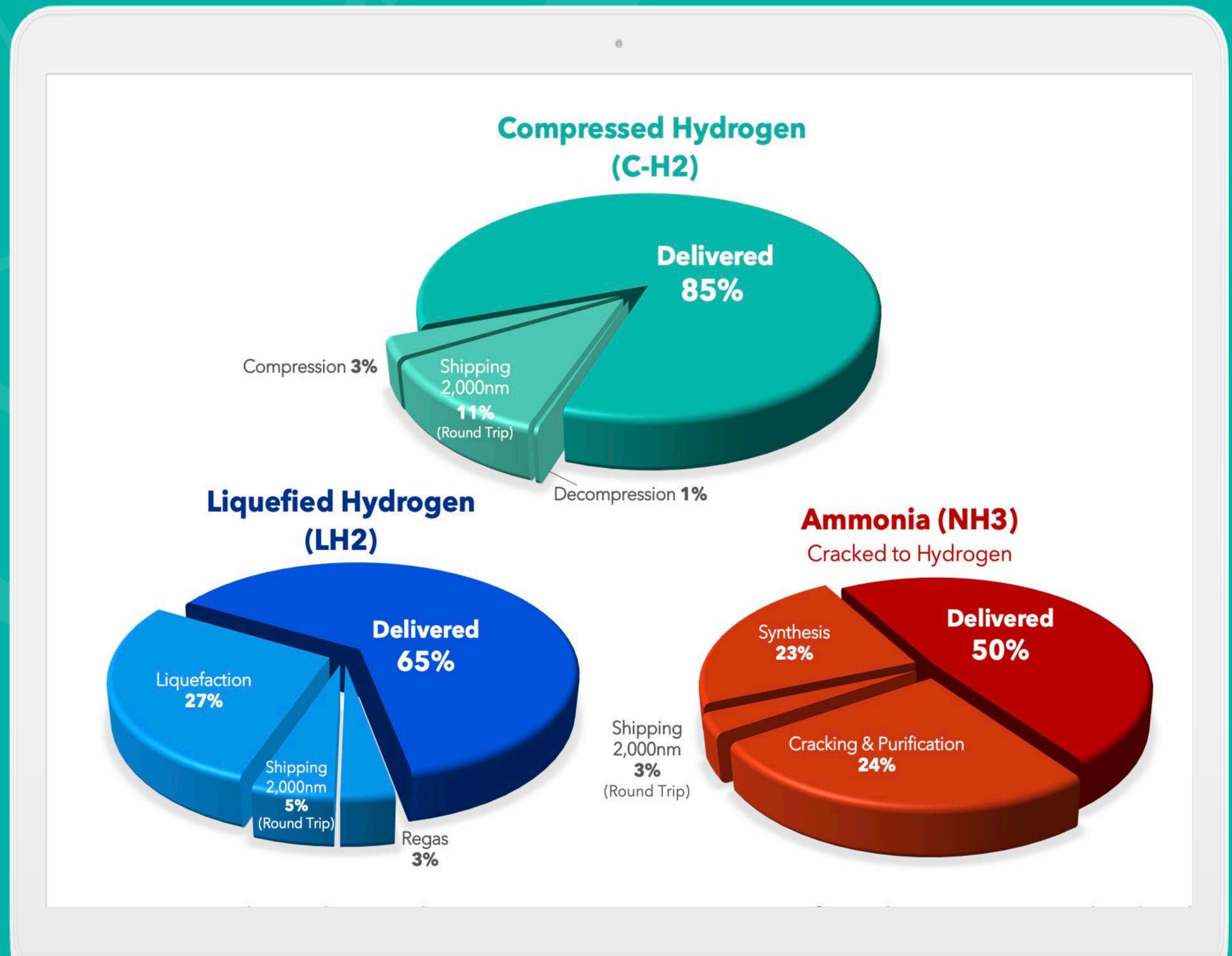


Breakdown of energy usage (% of hydrogen delivered)

Compression has a lower energy density but the supply chain is energy efficient

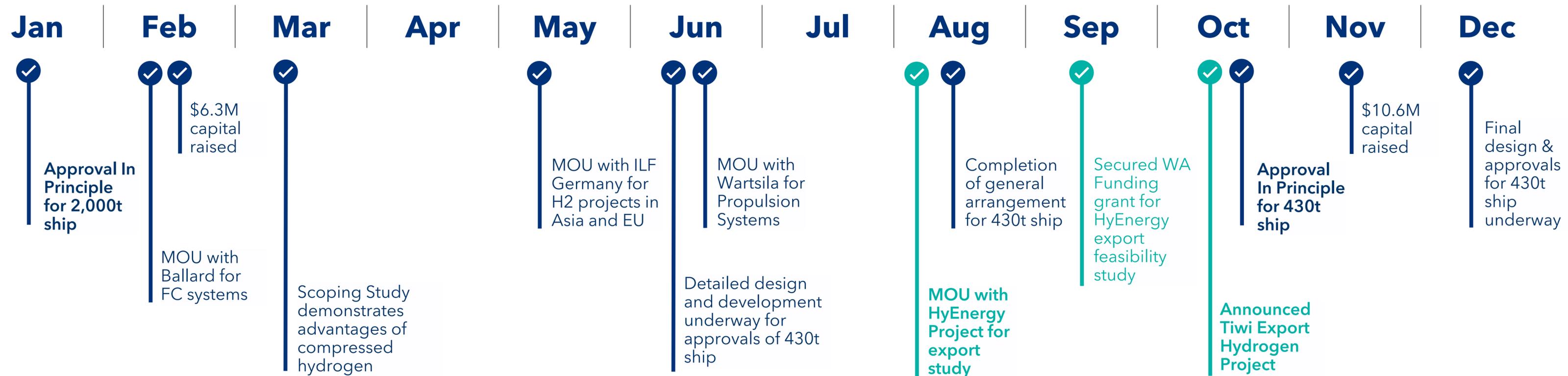
Illustrative example to demonstrate the energy penalty of each process in the hydrogen supply chain.

Based on the delivery of 200ktpa of green hydrogen over a distance of 2,000 nautical miles using 2,000-ton capacity ship with on-board fuel cells



2021 delivered significant milestones to position GEV as a integrated developer of green hydrogen projects

2021 validated our strategy to enter the hydrogen sector



> 2022 will demonstrate path to commercialisation for compressed hydrogen

Forward Program for Shipping Class Approvals aligned with the **Tiwi Hydrogen Project**

Timeline of approvals through to first export and operations in 2026

Q1 22	Q2 22	Q3 22	Q4 22	1H 23	2H 23	2024	2025	2026	2027
--------------	--------------	--------------	--------------	--------------	--------------	-------------	-------------	-------------	-------------

Shipping Class Approvals



Tiwi Hydrogen Project



HyEnergy Project



New Business Development Opportunities...





Project Development

Global opportunity to develop a portfolio of green hydrogen projects

Strategy is to develop a portfolio of projects to position compression as a preferred solution for regional marine transport

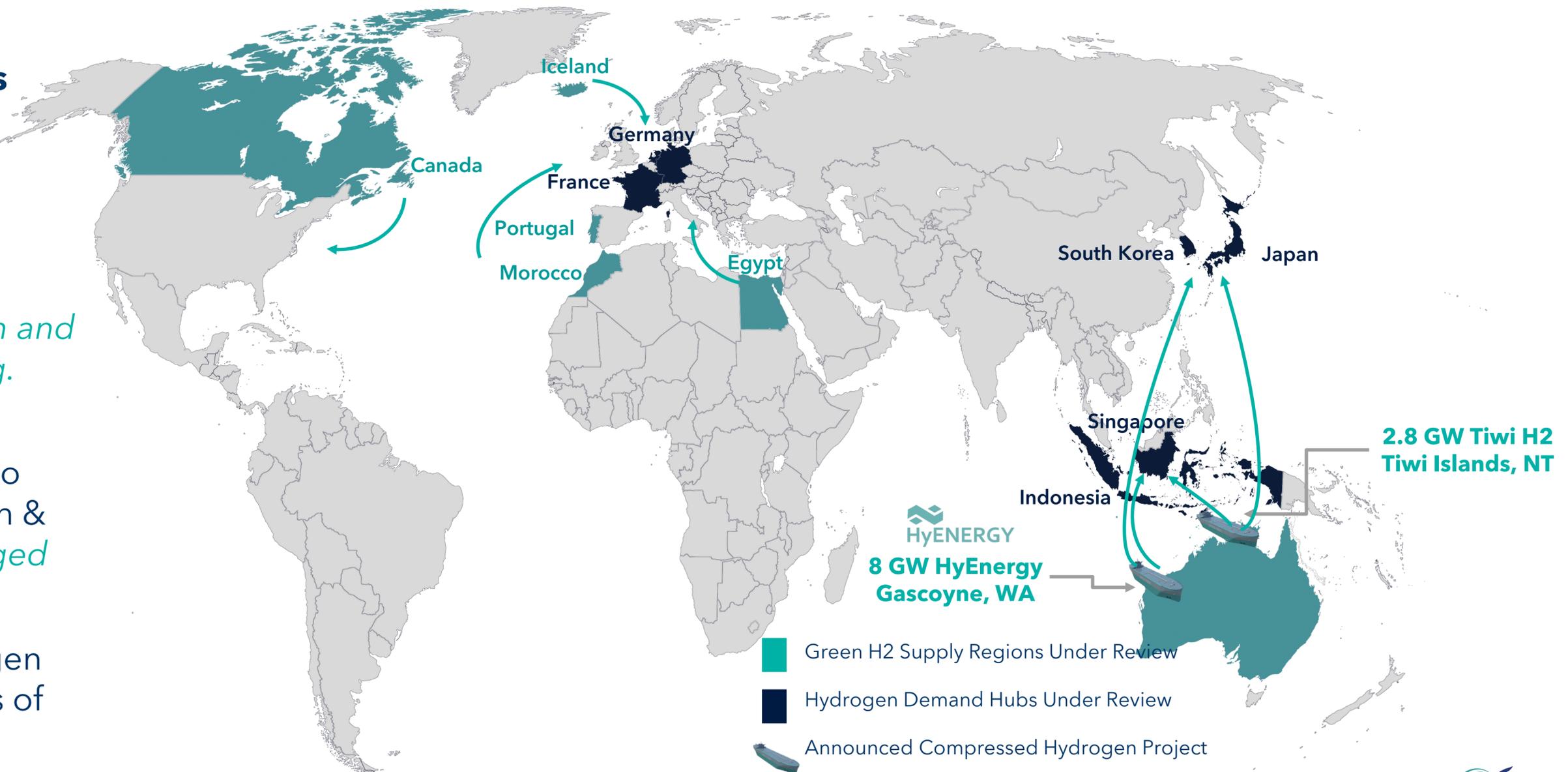
Two projects export projects undergoing feasibility studies

Tiwi Green Hydrogen Export Project (Northern Territory) for export markets into Asia.

100% GEV project includes upstream renewable generation and compressed hydrogen shipping.

HyEnergy Project (Western Australia) for export markets into Asia. Partners include Total Eren & Province Resources. *GEV engaged for compressed shipping only*

Screening continues for hydrogen projects in the regional markets of Asia and Europe



Tiwi Hydrogen Project strategically located to key export markets

- > Positions GEV as a developer/owner of green hydrogen molecules and fully integrated hydrogen supply chain for export
- > First-mover advantage for export of gaseous green hydrogen from Northern Australia to key markets

2.8 GW
Solar
Generation

~100ktpa
Green
Hydrogen

2026
Target first
export

~1,400ktpa
CO2 Emissions
Avoided

Tiwi Hydrogen Project Supply Chain



GEV acknowledges that its proposed Tiwi Islands Green Hydrogen Export Project is located on the traditional lands of the Munupi people. It is a privilege to have the support and such a close working relationship with the Tiwi Land Council and Munupi Landowners.



Support from the Northern Territory
Commissioners for Investment and Major projects



Site infrastructure enables first-mover export project from Northern Australia

- > **EIA referral submission 2Q 2022, Feasibility completion and FID decision 2H 2023, target first export late-2026**
- > Staged development aligned with customer demand
- > Integrated with CH2 transport supports efficient and modular approach for export
- > Northern Territory Government and land owner support
- > Commercial, technical and financial partners will be introduced at the right time to maximise value to GEV shareholders.

STRATEGIC LOCATION

Tiwi Islands located along the northern most part of Australia providing shorter regional shipping distance to Asian export markets

TRADITIONAL LAND OWNERSHIP

Ownership has always remained with the Munupi people - a clear process to a commercial lease (Section 19) for operations

LOW ENVIRONMENTAL IMPACT

Existing plantation land for commercial use. Small scale desalination for water use and options for local water catchment

HIGH SOLAR INTENSITY

1,800 hectare solar site has been assessed to have the potential for 2.8 GW of solar generation, in a region of high solar intensity

EXISTING PORT INFRASTRUCTURE

Availability of existing port capable of berthing pilot-ship and industrial precinct for installation of electrolysis and compression

LANDOWNER SUPPORT

Support of the Tiwi community given new sustainable industry and long-term economic opportunities for jobs and social benefits



MOU to to evaluate export of green hydrogen from 8GW HyEnergy Project to Asia-Pacific using GEV's GH2 Carriers

- > Objective is to demonstrate the technical & commercial advantages of compression for export to Asia-Pacific - Singapore and Taiwan are being evaluated
- > Scope includes export solution for Phase 1 of the HyEnergy project (4GW of renewable energy producing ~ 275,000 tpa of H2)
- > Compression is ideally suited for the HyEnergy Project
 - Scaled production with Phase 1 operations and exports in late 2020's
 - Proximity to Asia-Pacific markets (i.e. 1800nm to Singapore)
 - Option to load offshore vs approve/build new traditional port berthing
- > Received \$300,000 funding grant from the WA Government
- > **Delivery of GEV feasibility study June quarter 2022**

HyENERGY SCOPING STUDY OUTCOMES (March 2022)

ZERO CARBON HYDROGEN

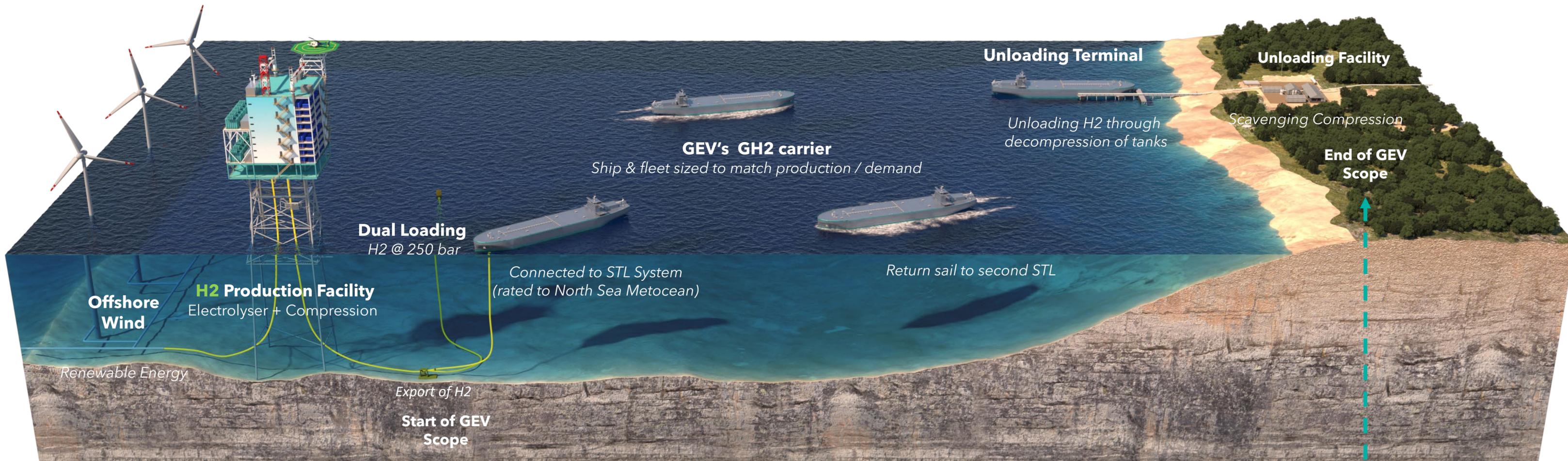
- > Province Resources and Total Eren developing mega-scale renewables project (8 GW renewables and 5GW electrolysers) to produce 500,000 tpa green hydrogen
- > Total Eren is a global renewable energy IPP with more than 3.5 GW of solar and wind assets in operation or under construction. Total Eren is ~30% owned by energy major TotalEnergies.
- > Scoping Study confirms the technical feasibility of an integrated green energy production project, using renewable power generated from the Gascoyne.
- > Definitive feasibility completion 2024
- > Phase 1 production phased from 2027



This project receives funding from the Renewable Hydrogen Fund as part of the Western Australian Government's Renewable Hydrogen Strategy

Compression provides for efficient offshore hydrogen production using installed wind generation

An energy efficient offshore transport solution for the development of an hydrogen production facility using "off-grid" wind power



Conceptual Illustration and Scope of a compressed offshore supply chain



Hydrogen sector with significant tailwinds

Hydrogen market set for remarkable growth through to 2050

Role of hydrogen in the energy transition: The key tool for harder-to-de-carbonize sectors: Iron & Steel, Refining, Power Generation, Heavy Transport, Heat, & Shipping

+30 Countries
Established Hydrogen Strategies

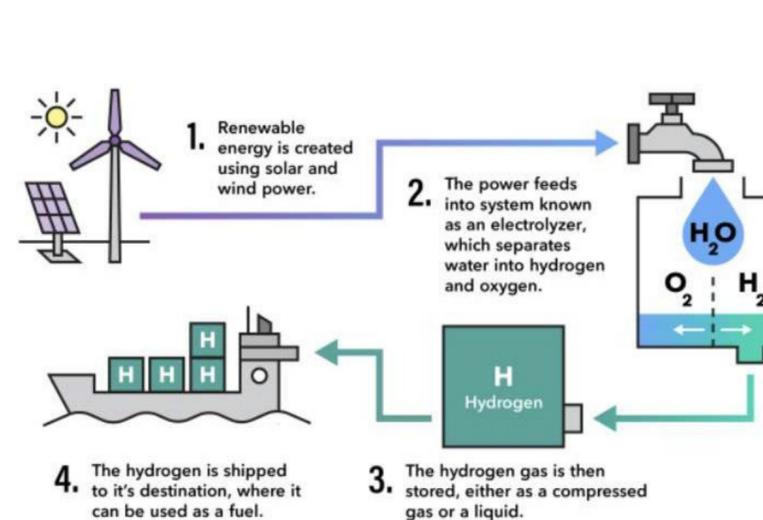
USD 70 Billion
Public Funding Commitments

USD 5 Trillion
Investment in H2 Supply Chains

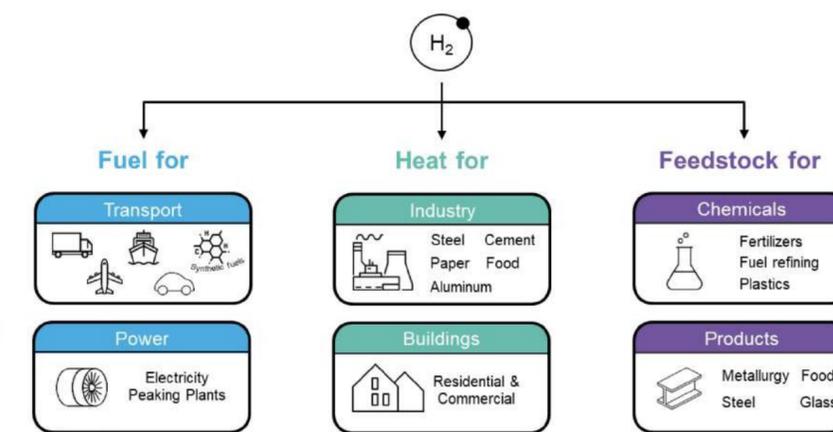
150M Tonnes
Seaborne Trade by 2050

Safe and cost-efficient transport, storage and distribution of hydrogen will be critical in setting the pace of its large-scale deployment

Green H2 production



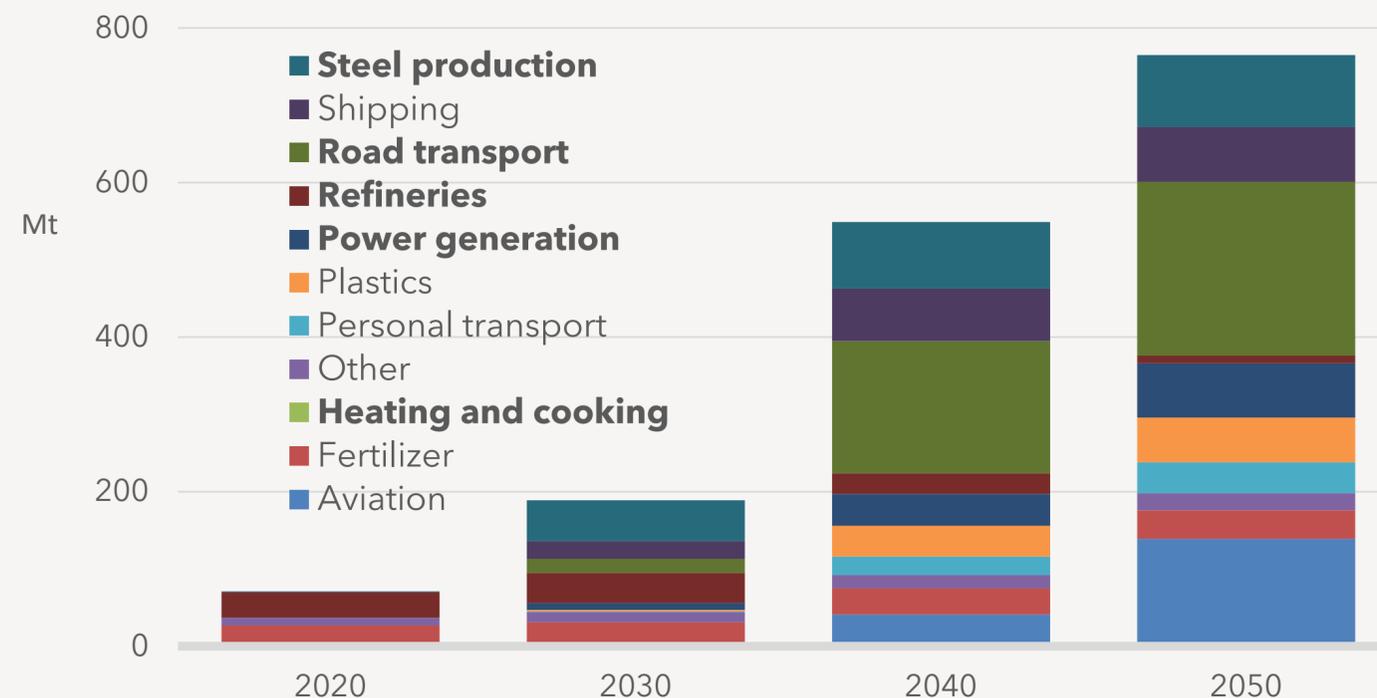
Hydrogen uses



Source: BloombergNEF

- > Falling costs of renewables and hydrogen technologies to make green hydrogen cost competitive by 2030
- > Commitment to 2030 net-zero targets brings forward investment case for a 'green premium'

Addressable market for hydrogen increases substantially to 2050, with 30% forecast for seaborne trade*



Source: Rystad Energy HydrogenCube – high case scenario; * Wood MacKenzie

Opportunity for GEV to be a market leader in hydrogen transport

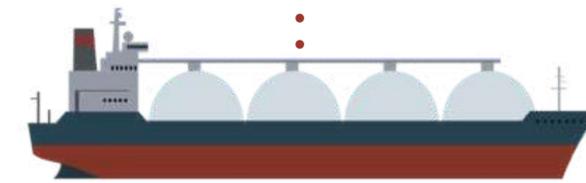
“Hydrogen seaborne trade could hit 150M tonnes by 2050.”

-- Wood Mackenzie, October 2021

- > Marine industry will need significant investment in supply chains to transport equivalent energy as hydrogen
- > Only one demonstration ship (pending sea-trials) designed for liquefied hydrogen, built by Kawasaki Heavy Industries (80-ton capacity)
- > Two shipyards with Approval in Principle for liquefaction storage design at scale
- > Transportation and distribution costs for hydrogen are a function of the volume transported, the distance and the type of hydrogen carrier
- > GEV targeting first operations mid-2020's commercial scale operations

NOW: FOSSIL FUELS

Thousands of ships moving natural gas, oil & coal



637 carriers transporting natural gas



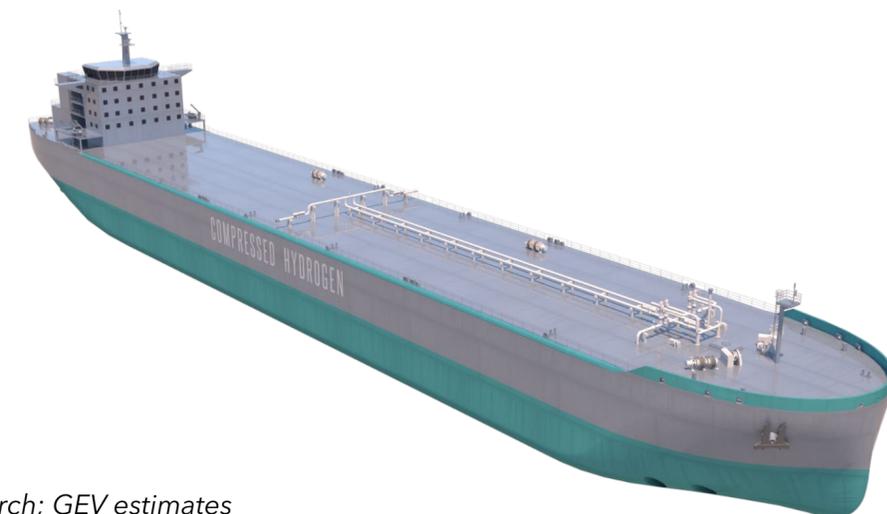
100s dry bulk carriers transporting coal



2,193 tankers transporting petroleum

2030 HYDROGEN

GEV targeting first operations 2026





Developing safe, sustainable and
efficient export supply chains for
green hydrogen

Contact

Martin Carolan

Managing Director
mcarolan@gev.com
T: +61 404 809019



www.gev.com

ASX.GEV



@GEVmarineCH2



Global Energy Ventures (ASX: GEV)



SYDNEY, PERTH, CALGARY, ROTTERDAM, LISBON



info@gev.com

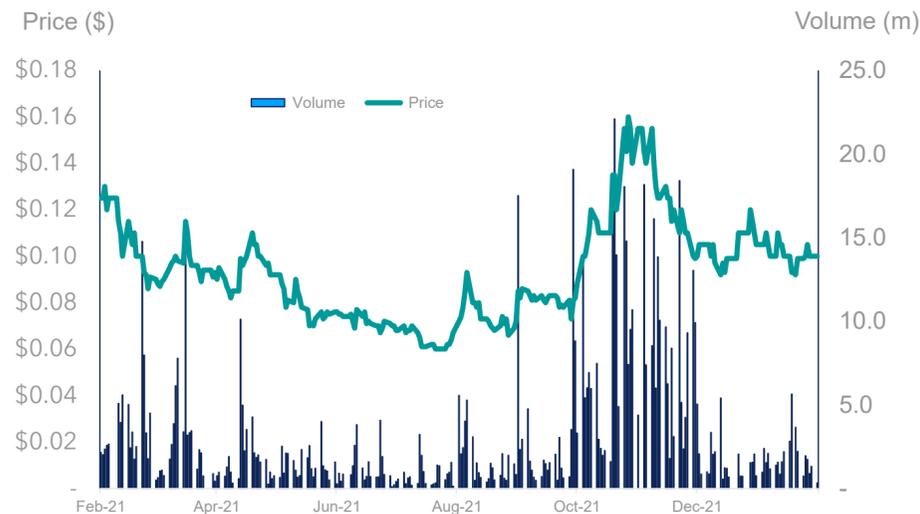


Appendices

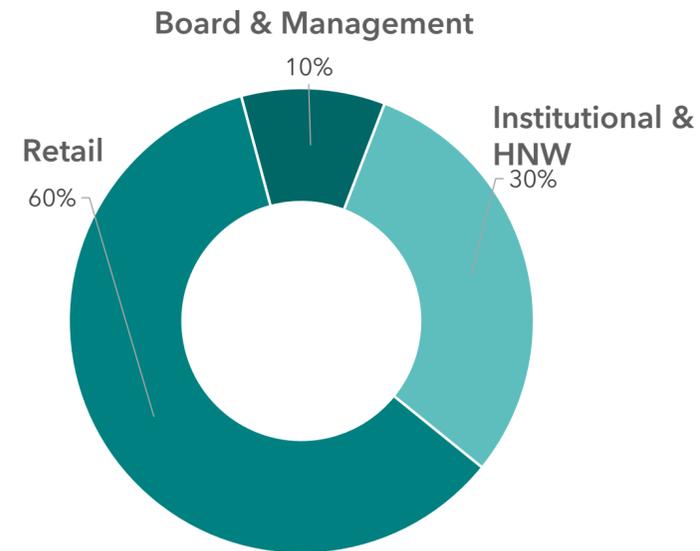
Corporate Overview

Ordinary Shares on Issue (GEV.ASX)	553m
Other Listed Exchanges	Frankfurt, FRA:WS9
Market Capitalisation (at 10c)	\$55.3m
Cash (at 31 December 2021)	\$14.6m
Listed Options on Issue (GEVOA.ASX) ¹	96.7m
Performance Rights & Shares ^{2 3}	43.0m
Unlisted Options ⁴	9.0m

12mth Share Price Performance



Shareholding (Undiluted)



¹Listed Options GEVOA, expiry 26 May 2023, exercise \$0.12
²Performance Rights & Shares issued to Board, Management and Consultants
³Refer to the 30 June 2021 Annual Report for full details of all Milestone Conditions
⁴Broker options exercisable at 18.75c, Expiry November 2024



Developing safe, sustainable and efficient supply chains for green hydrogen