

GEV SIGNS MOU WITH ILF FOR HYDROGEN PROJECTS IN EUROPE & AUSTRALIA

HIGHLIGHTS:

- **GEV and ILF have executed a Memorandum of Understanding (MOU) for the identification and development of green hydrogen projects in Europe and Australia that will include a compressed hydrogen (C-H2) shipping solution.**
- **ILF is an international engineering and consulting firm based in Germany focussed on major energy, industrial and infrastructure projects (for more details: www.ilf.com).**
- **ILF's engineering expertise covers the hydrogen value chain from renewables, water supply down to hydrogen production, transportation and storage and offers solutions for a large spectrum of hydrogen-related projects.**
- **The MOU provides GEV with access to the fast-developing hydrogen economy in Europe, leading the world with clean energy policy, incentive schemes, deep pools of ESG financing, production and centres of hydrogen demand.**
- **Up to 85% of the world's proposed green hydrogen projects are in Europe, with a pipeline of over 9 GW in Germany, 6 GW in the Netherlands, and 4 GW in the UK, all scheduled to be operational by 2030.¹**
- **Australia has now announced 6 of the top 20 gigawatt-scale green hydrogen projects, supported by low renewable energy costs and export markets that could include Germany.²**
- **GEV and ILF to immediately commence the review of identified green hydrogen projects suitable for a C-H2 shipping solution, both onshore and offshore applications.**

Australia based Global Energy Ventures Ltd (ASX: GEV, the Company) is pleased to announce it has entered into a Memorandum of Understanding (MOU) with Germany based ILF Beratend Ingenieure GmbH (ILF Consulting Engineers) to identify and develop green hydrogen projects in Europe and Australia which will include GEV's C-H2 shipping solution.

Martin Carolan, GEV Managing Director, commented: *"GEV has identified Europe as a key market for the company's C-H2 shipping and supply chain with the renewable energy sector growing at a rapid rate for some years and the transport of green hydrogen using compression highly suitable given the short to medium distances to future demand centres such as Germany. The MOU with ILF will establish GEV's launch into Europe with one of the world's leading engineering firms with expertise in the design and implementation of green hydrogen projects. ILF's experience in hydrogen, strong reputation in project delivery and long-standing relationships will be beneficial to GEV in Europe while we will also look to ILF's expertise across the value chain for hydrogen projects in Australia."*



Jens Kottsieper, ILF Business Development Manager, commented: *"ILF sees Australia as an important supplier of green hydrogen, and we look forward to applying our expertise across the value chain. We also recognise the need for shipping of hydrogen into Europe given the need for large quantities. Transporting large quantities of gases has been a topic that has kept us busy for over 50 years. We are glad to be able to complement our pipeline and hydrogen expertise with GEV's expertise in low-cost transport by ship. The cooperation with GEV allows us to advise our customers even more comprehensively on their transport issues in order to develop a solution that fits their specific requirements. ILF is competent in consulting, engineering and project management; GEV is competent in project implementation. With our joint support, gas really does flow. ."*



¹ Source: Aurora Energy Research, May 2021

² <https://www.rechargenews.com/energy-transition/growing-ambition-the-worlds-22-largest-green-hydrogen-projects/2-1-933755>

OBJECTIVES OF THE MOU:

- GEV is a project developer of C-H2 supply chain projects and is progressing the design and approvals of the C-H2 Ship, along with the related ship loading and unloading facilities.
- ILF is a multi-disciplined international engineering and consulting firm that works with clients to execute technically demanding industrial and infrastructure projects including, without limitation, gas and energy projects.
- Both Parties will cooperate and explore renewable project opportunities regarding the full hydrogen value chain employing GEV's C-H2 ship and supply chain in Europe and Australia.
- The term of the MOU is valid until 31 December 2022 and can be extended by mutual agreement.

ILF- A GLOBAL ENGINEERING FIRM WITH EXPERTISE IN THE FULL HYDROGEN VALUE CHAIN

ILF is an international engineering and consulting firm that has been helping its clients successfully execute technically demanding industrial and infrastructure projects for more than 50 years. With more than 2,500 highly qualified employees at more than 40 office locations across the world providing a strong regional presence. Close cooperation within the network of the ILF makes it possible to draw on international experts and make use of their special experience, processes, and tools.

The company is privately owned by the founding families and is therefore completely independent. ILF's main business areas are:

- > Energy & Climate Protection (including Hydrogen)
- > Water & Environment
- > Transportation & Urban Spaces
- > Oil, Gas & Industrial.



Hydrogen related projects are well known to ILF, as it is part of ILF's pipeline, refinery and petrochemical plant business for over 20 years. Particularly ILF's long term experience in the design of facilities as well as pipelines is a valuable basis for the design of electrolyser plants as well as hydrogen transport and storage solutions. ILF has extensive experience in the engineering of the entire hydrogen value chain, including the design of renewable electricity generation, water treatment/ desalination, hydrogen production, storage, and transport.

ILF's project highlights include the Demo4Grid project, a 4 MW electrolyser plant with hydrogen storage and truck fuelling station in Austria, in which ILF is entrusted as Owner's Engineer with the conceptual design, approval planning and detailed design; Element Eins, a feasibility study for Germany's gas and electricity grid operators for a 40-100 MW power-to-gas plant including electrolysis, methanation, hydrogen pipeline, and injection into the existing gas grid; the Red Sea Development Project, a feasibility study to investigate hydrogen as a possible energy storage solution for up to 50 MW of surplus electricity from renewable generation sources in Saudi Arabia; or various studies of Compressor Stations, investigating the impact on machinery, balance of plant and pipeline of injecting hydrogen into the existing natural gas system.

ILF joined the AquaVentus consortium in 2020 to develop up to 10 GW production of green hydrogen on the island of Helgoland and a 200 km hydrogen pipeline for transport to the shore. ILF is thus supporting the trend towards upscaling, as green hydrogen will become competitive when it is produced with cheap electricity in quantities comparable to natural gas and crude oil.

To learn more about ILF, please visit www.ilf.com.

EUROPE HAS ESTABLISHED A STRONG BUSINESS CASE FOR GREEN HYDROGEN

The EU Hydrogen Strategy's goal in 2030 is for the EU to have 40 GW of its own green hydrogen production capacity and the potential for the import of another 40 GW from outside of the EU to meet net zero targets in 2050. ILF research has identified a number of enablers for the EU hydrogen market include:

- > A high concentration of potential end-users of hydrogen includes refineries and petrochemical plants already using hydrogen, energy intensive industries seeking to switch from fossil fuels, and heavy transport applications.
- > Existence of large ports where hydrogen unloading and storage facilities can be constructed, connected to inland waterways and pipelines.

- > Extensive network of gas pipelines, some with excess capacity for hydrogen blending.
- > Close to the North Sea where offshore wind has the potential to provide large amounts of cheap renewable electricity for green hydrogen production.
- > Green hydrogen production offers the renewable electricity sector several benefits:
 - Absorb excess renewable electricity production at times when demand is low or prices may be negative or generation is otherwise curtailed.
 - Store energy in very large quantities over long periods, which current batteries are not suitable.
 - Extends the reach of renewable energy into areas where hydrogen offers a cheaper, quicker alternative to direct electrification.
 - Export of excess renewable generation to countries in demand.

GEV DEVELOPING A BUSINESS CASE FOR OFFSHORE PRODUCTION OF GREEN HYDROGEN

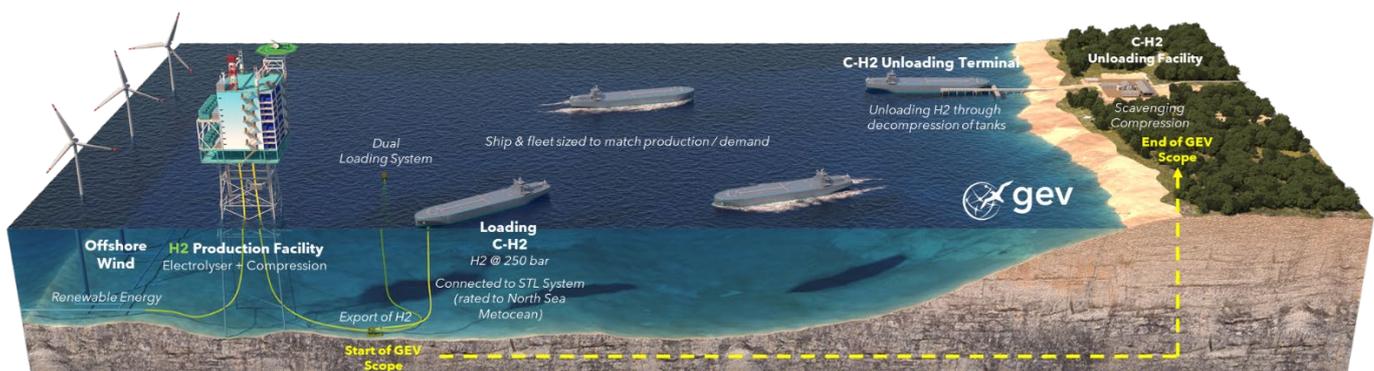
ILF will design the upstream infrastructure from the producer to the export or loading facility and downstream from the import or unloading facility to the consumer, whilst GEV is covering the port-to-port shipment of hydrogen.

For project opportunities that involve the import of hydrogen from regional markets in close proximity to Europe, with examples being the Middle East and North Africa region, GEV has identified an opportunity to leverage its offshore loading capability and target a C-H2 solution for the offshore wind industry. Figure 1 below provides a conceptual illustration and scope for a fleet of C-H2 ships to deliver an offshore loading and transport solution to those areas where a sub-sea cable or pipeline is not suitable based on environmental limitations.

The key benefits of GEV's C-H2 offshore loading capability include:

- > Compression can load follow the production of offshore wind and green hydrogen.
- > Offshore loading capability provided by APL/NOV and is a proven application for high pressure gas and suitable to variable met-ocean conditions.
- > C-H2 solution suited for offshore loading as there is no requirement for cryogenic pipelines.
- > C-H2 shipping fleet can be sized to match the scale of both the supply and demand required.
- > Less environmental permitting than subsea pipelines.
- > Ideally suited for floating wind with minimal fixed infrastructure.

Figure 1: Conceptual Illustration and Scope of GEV's C-H2 Supply Chain



Source: GEV

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This ASX announcement has been authorised by the Board of GEV.

FOR FURTHER INFORMATION PLEASE CONTACT:

Martin Carolan

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

For more information visit:
www.gev.com

 @GEVmarineCH2

 +61 8 9322 6955

 19 / 40 St Quentin Ave.
Claremont WA 6010

FOR FURTHER INFORMATION PLEASE CONTACT:

Jens Kottsieper

Business Development Manager Hydrogen, Energy and New Business
T: +49 89 25 55 94 33 7
E: hydrogen@ilf.com
W: <https://www.ilf.com/business-areas/energy-climate-protection/hydrogen/>



ABOUT GLOBAL ENERGY VENTURES LTD

Global Energy Ventures (ASX: GEV) is an energy transition company with a mission to deliver compressed shipping solutions for transporting energy to regional markets. Our business model is to Build, Own and Operate the production, storage and shipping of green hydrogen.

In 2020, GEV introduced the world's first large-scale Compressed Hydrogen (C-H2) ship and positioned the company as an early mover to fast track the marine transport of Hydrogen. The engineering and design of the C-H2 ship has benefited from the Company's long-standing history in developing compressed gas carriers through to final construction approval.

GEV has demonstrated that the simplicity and energy efficiency of its C-H2 shipping solution is ideally suited for exporting hydrogen over medium distances (i.e., Australia to Asia-Pacific) providing a lower delivered cost and eliminating the technical barriers of other transport alternatives.

For more details on the Company please visit www.gev.com



Disclaimer: This announcement may contain forward looking statements concerning projected costs, approval timelines, construction timelines, earnings, revenue, growth, outlook or other matters ("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 supply, gas reserve estimates, the ability to locate markets for CNG, fluctuations in gas and CNG 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 announcement or to keep current any of the information provided, except to the extent required by law. 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.

\$ refers to Australian Dollars unless otherwise indicated.