



## GEV and ENERSEA TRANSPORT INC SIGN EXCLUSIVE CNG TECHNOLOGY AND DEVELOPMENT COOPERATION AGREEMENT

17 March 2017

### Key Highlights:

- Exclusive technology and development cooperation agreement related to EnerSea's CNG marine transport solution.
- CNG is a proven, safe, reliable and well established technology set to become the next generation of marine gas transportation.
- CNG provides a cost effective, lower capital cost transport solution in regional markets which are beyond pipeline reach or not large enough for LNG.
- Exclusive markets are the Indian Sub-continent and Indonesia.
- Discussions with multiple gas suppliers and gas customers already underway in both regions.
- Agreement sets a path to accelerate GEV's maiden CNG development project.

Global Energy Ventures Ltd (GEV or the Company), ([www.gev.com](http://www.gev.com)) is pleased to advise that it has executed an Exclusive Technology and Development Cooperation Agreement (Agreement) with EnerSea Transport Inc (EnerSea) ([www.enersea.com](http://www.enersea.com)) to accelerate discussions underway in two markets identified for CNG.

EnerSea is a Houston based company focused on the global development of integrated compressed natural gas (CNG) projects utilising its proprietary VOTRANS™ and VOLANDS™ CNG technology (together the "EnerSea Technology").

CNG is a proven, safe, reliable and well established technology. CNG delivered to markets can replace fuels such as coal, fuel oil and diesel, significantly reducing CO<sub>2</sub> and other emissions.

**Under the terms of the Agreement, GEV has the exclusive rights to the EnerSea Technology for the supply of CNG in two high growth gas demand markets:**

- **Indian Sub-Continent**, which includes India, Pakistan and Sri Lanka; and
- **Indonesia.**

As highlighted in the Company's investor update on 13 March 2017, GEV has identified multiple gas suppliers and multiple customers in a number of regions that include the Indian Sub-continent and Indonesia. Discussions and negotiations have commenced on gas supply and with potential customers. **These discussions can be accelerated now that this Agreement with EnerSea has been executed.**

GEV considers EnerSea to be the global leader in the CNG industry, with the EnerSea Technology providing for a cost-effective transport solution for natural gas to markets where alternative gas

Global Energy Ventures Ltd

ABN 53 109 213 470

Postal Address PO Box 198 West Perth 6872 Western Australia

[www.gev.com](http://www.gev.com)

delivery solutions such as pipelines or liquefied natural gas (LNG) are not economic or geopolitically practical.

**GEV Executive Chairman, Maurice Brand, said:** “The Company had carefully considered a number of CNG technologies but was attracted to EnerSea due to their significant technical accomplishments, including the granting of various Patents, engineering, project management and construction planning undertaken and receipt of essential approvals from key maritime transport and other regulatory agencies. The EnerSea Technology is now ready to be commercialised.”

“While we have identified commercial CNG opportunities across all major gas markets, we are particularly encouraged by India where the market opportunity is significant given it is in the top 10 countries for gas consumption and top 5 for total energy consumption. While still dominated by coal and declining domestic production, the Indian government recently outlined its Gas4India campaign aimed at promoting a gas economy. **One of the stated goals is to increase the energy mix from 6.5% natural gas to 15%, supported by a nationwide gas grid and setting up gas infrastructure.** India’s net imports of gas will only continue to rise as the country switches to cleaner fuels. It is widely publicised that a number of gas-fired power stations remain idle as the country faces gas shortages due to high import costs for LNG. We believe a delivered CNG price will be competitive against current LNG import prices. We also expect a similar growth profile for Pakistan, while countries like Sri Lanka are just getting started on gas infrastructure.”

“In Indonesia we have identified stranded proven gas fields that remain uneconomic due to the nature of the gas markets within Indonesia and limited transport infrastructure solutions. A low capital cost CNG solution that can transport smaller volumes to multiple destinations is right in our sweet spot.”

**EnerSea’s Chief Executive Officer, Feisal Ahmed, said:** “EnerSea has been developing integrated CNG projects globally with our expanded capabilities covering the full gas value chain. We are now delighted to start working with Maurice and the GEV team on the two CNG regional opportunities. Together, the GEV and EnerSea teams bring strong technical, business development and capital market skills to execute these projects.”

**EnerSea states that its patented technology, VOTRANS™ (Volume Optimized Transport and Storage), is the most cost-effective CNG solution in the marketplace. VOTRANS is patented, tested and approved.** VOTRANS systems have been developed to be safe and reliable with many advantages over the alternatives.

- 50%+ lower operating pressure than other CNG concepts (lower compression horsepower and fuel requirements).
- 60%+ greater gas storage efficiency than other CNG concepts (less pressure and lower temperature means more gas stored per ton of steel).
- Use of carbon steel pressure vessels allows conventional pressure vessel fabrication (no coiling or fiberglass winding and no single-sourced fabrication).
- Less containment steel also reduces total ship weight and related fuel use.

**The application of the EnerSea CNG marine transport technology will support a wide variety of solutions to regional opportunities that include:**

- Markets located where pipelines have economic or geopolitical constraints.

- Supply sources not large enough to justify the high capital investment required for LNG projects.
- Offtake gas directly from offshore production facilities, including in deep and ultra-deep waters.
- Replace fuel oil and diesel with natural gas in “stranded” markets.
- Offtake the associated gas from oil production fields.
- Produce and transport gas from extended oil well tests and early production systems.
- Serve as an “all-in-one” gas production host and transport system for remote fields.

#### **Comparison of CNG with LNG supply chain**

CNG is often compared with LNG, as both are large volume, marine-based gas transport solutions. However, these two technologies typically target different sectors of both supply sources and energy markets. In summary, the major differences include:

- CNG projects do not require the large capital investments for massively expensive liquefaction and regasification plants. Thus, the overall supply chain project is typically an order of magnitude less expensive.
- Footprint and environmental impact is much less for CNG terminals than for LNG terminals.
- LNG often requires expensive pre-processing of the supply gas to a much higher degree than required for CNG to remove components such as mercury and CO<sub>2</sub>.
- CNG does not experience “boil off” gas emissions from ships and storage facilities.
- Transportation of CNG is typically more energy efficient than LNG.
- In summary, CNG targets small-to-medium sized regional gas delivery projects, while LNG must be geared toward large scale, long haul projects.

#### **Under the terms of the Agreement:**

- GEV and EnerSea are to negotiate a Technical Services Agreement (TSA) with respect to the provision of technical services by EnerSea to GEV to progress both the Indian Sub-Continent and Indonesia CNG opportunities to financial investment decision;
- GEV and EnerSea are to negotiate a Master Licence Agreement (MLA) term sheet for the EnerSea Technology, which will set out the technical and commercial arrangements that will apply on a project by project basis; and
- GEV and EnerSea anticipate that the above terms will be met before 31 May 2017, the expiry date of the Agreement (which can be extended by mutual agreement).

#### **For further information please contact:**

Maurice Brand  
**Executive Chairman**  
 T: +61 8 9322 6955  
 E: [mbrand@gev.com](mailto:mbrand@gev.com)

Jack Toby  
**Company Secretary**  
 T: +61 8 9322 6955  
 M: +61 417 962 369  
 E: [jtoby@gev.com](mailto:jtoby@gev.com)