Beer & Co.
Equity Research

**Global Energy Ventures (GEV.ASX)** **2 Sept. 2019**

# Shipping IP that monetises modest gas volumes with modest capital

Price

**16.5c**

Risked, NPV based Valuation

**$1.40**

Commodity

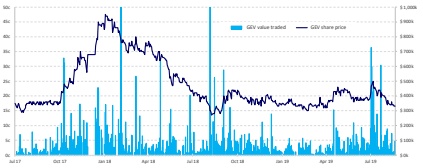
**Marine transport of gas**

- **GEV has developed a method to transport gas that is relatively cheap, when compared with LNG, and very flexible when compared to pipelines.**
- **GEV are able to purchase gas, especially from offshore platforms, and transport it to cities at a modest cost.**
- **GEV has announced 5 potential gas regions, four of which total 945MMscf/day. Beer & Co calculate NPVs for 3 likely projects ranging from US$ 400m to US$ 1,000m.**
- **In Beer & Co.'s view, there are many ways in which GEV is able to generate value from its technology, though most value will be realised in 3 to 4 years from now, when the first ship is operating.**

## Snapshot

| | |
|---|---|
| Market Cap | $65m |
| Cash on hand ($3m in August) | $5.5m |
| Shares on Issue (including restricted) | 383m |
| 52 Week High | 26.0c |
| 52 Week Low | 14.0c |
| 1 month / 6 month VWAP | 17.7c /20.1c |

**GEV : daily share price v. value traded**



GEV has developed the CNG Optimum technology to transport 200MMscf of Compressed Natural Gas using a HandyMax size vessel.

GEV has received regulatory approvals, engaged shipyards and is currently working to convert expressions of interest into contracts to buy, deliver and sell gas.

The CNG Optimum technology has lower capital costs and is more flexible than other sea transport technologies, such as LNG and pipelines, within 2,500km.

The flexibility offered, in terms of gas sourcing, supply and delivery, is the greatest asset of the technology and driver of its value.

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### GEV has developed the CNG Optimum technology, with approvals

The CNG Optimum technology enables a HandyMax size vessel to ship 200MMscf gas in a single voyage. The technology received regulatory approvals in January 2019 and patent applications were then lodged.

The technology fills the hold of a standard HandyMax size vessel with standard gas pipe in a way that gives the ship cross-sectional rigidity. The regulatory standards offer protection for GEV's IP.

### Valuing the technology

A CNG Optimum ship can moor nearby an off-shore platform, take on gas that the producer is not able to sell, and then sail to a nearby city and off-load the gas into the grid.

GEV could acquire gas for $2/mmbtu (we use $3 in our analysis). International delivered gas prices range from $6 to $9, while all-up transport costs vary with the distance, ranging from $2.0 to $3.3.

This gives a margin to GEV of $2 to $3.5/mmbtu, or US$ 0.4m to $ 0.7m per voyage and one ship might do 60 up to 140 voyages in a year, depending on the distance, so generate around US$ 40 to $60m.

The greatest cost is US$ 135m to US$ 140m for each vessel. Operating costs expensed to the P&L are less than $1/mmbtu, so generating a payback for each vessel from 2 to 3 years, with a life of 20 years or more

### 5 Expressions of Interest; now seeking contracts

GEV requires bankable contracts from off-takers, and evidence of gas resources from suppliers, to secure the debt required to build the ships.

A contract to supply 200MMscf/day, 300km from offshore platform to a city, with one day to load and one day to unload requires 4 ships.

Assuming a gas purchase price of $3.00 and a sale price of $6.50, which is below the cost of LNG imports, Beer & Co calculates an NPV of US$ 1,000m for this contract, if it were signed in December 2019.

The first ship will take about 30 months to be delivered and each subsequent ship a further 4 months.

# Global Energy Ventures (GEV)

## Introduction

In September 2017, GEV announced the acquisition of SeaNG, with its Compressed Natural Gas (CNG) technology. In January 2019, GEV announced final regulatory approval for the design of the ship to load and store gas and the lodging of patent applications.

In December 2018, after announcing preliminary regulatory approval, GEV announced that it was approaching shipyards to build the vessels and in July 2019, GEV announced that it had executed a Letter of Intent with Yantai CIMC Raffles Offshore Limited shipyard in China for the construction of four ships.

GEV has announced 5 potential gas supply and sale agreements in different regions, and is now working to convert the first into a contract that can be used as security for the financing of the construction of ships.

The shipyard advised that from the time of order it will take about 30 months to deliver the first vessel, and each subsequent vessel will take a further 4 months.

## CNG Optimum 200 technology

GEV's technology is to ship 200MMscf of natural gas, compressed to 3,600psi, in a standard HandyMax size vessel, which is 190m in length. The gas is stored in standard gas pipes, packed in a hexagonal manner, in a manner that provides cross-sectional rigidity to the ship and avoids the pipes rubbing.

The rigidity and the avoidance of pipe friction were the keys to the regulatory approvals.

Figure 1 shows a CNG Optimum ship and its key parameters.

**Figure 1 : CNG Optimum 200 vessel**


Source : GEV

After receiving formal approval from the American Bureau of Shipping in January 2019, GEV lodged patent applications.

In Beer & Co.'s view, the regulatory approval, and the requirements of ship constructors and financiers, offer GEV protection for its Intellectual Property.

## Use of GEV's CNG Optimum technology

There are now 3 ways to transport gas :

- By pipeline;
- By freezing the gas to -161°C and shipping it as Liquefied Natural Gas (LNG); and
- By compressing the gas (CNG) and shipping it using the Optimum technology.

As shown in Figure 2, these differing methods have differing relative strengths and weaknesses, comparing gas volume against transport distance.

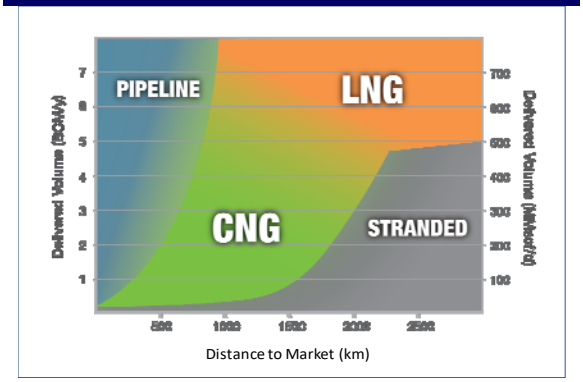
The CNG Optimum technology can also be used in some places where Figure 2 suggests a pipeline would be favoured :

- Areas which involve some conflict, either geo-political (eg. cross near a warring party) or environmental; and / or
- Where the seabed floor poses overwhelming engineering issues (eg. a deep trench, or a sudden, significant fall, to traverse).

The CNG Optimum technology has even further advantages :

- It is much more flexible than either LNG, which needs loading and unloading facilities able to withstand freezing, or pipelines that are fixed at both ends; and
- It is much less capital intensive than Floating LNG, as shown in Figure 3, which shows that projects requires billions of USD.

**Figure 2 : Technologies to transport gas**




Source : GEV Presentation February 2018

**Figure 3 : Relative capital intensity, CNG optimum v FLNG projects**

| Floating Gas Storage Vessel | LNG Capacity (Mtpa) | Total CAPEX (US$ billion) | CAPEX (US$/tpa) |
|---|---|---|---|
| **CNG Optimum (400 km)** | **1.5** | **650** | **435** |
| Cameroon Golar FLNG | 2.4 | 1,332 | 607 |
| **CNG Optimum (1,000 km)** | **1.5** | **920** | **615** |
| Ophir Fortuna | 2.2 | 1,537 | 698 |
| Golar Tortue | 4.8 | 1,632 | 667 |
| Petronas FLNG1 | 1.5 | 2,797 | 1,828 |
| Petronas FLNG 2 | 1.2 | 3,231 | 2,667 |
| Eni Coral | 3.4 | 4,760 | 1,400 |
| Shell Prelude | 3.6 | 12,468 | 3,256 |

Source : GEV Presentation July 2019

## Applying the CNG Optimum technology

There are a number of ways in which GEV can apply the CNG Optimum technology to generate value :

- By offering the service as pipeline, between an offshore gas supplier which has contracted with an onshore gas purchaser
  - In this case, GEV has no commercial involvement in the gas supply and purchase agreement;
  - On 24 July 2019, GEV announced that the full cost to transport 200MMscf/day a distance of 400km is US$ 2.20 - $2.40/mmbtu, and for 1,000km, the cost is $3.00 - $3.30/mmbtu

- GEV may organise the sales and purchase agreement, and capture the value it is able to generate
  - The most valuable contracts will have the following features :
    - (i) The gas supply is stranded, or has no economic value and is either flared (where that is still permitted), or re-injected; and
    - (ii) The gas supply is a relatively short distance offshore; and
    - (iii) Nearby markets are high value markets, eg. short gas, importing LNG, which sets a sale price.
- GEV may participate in Joint Ventures involving either or both the gas supplier and gas purchaser; and
- GEV may step further on-shore and source gas to supply a further value added activity (eg. small scale, remote electricity generation).

## Costs of CNG Optimum

The major cost of CNG Optimum is the capital cost of the vessel, which has 3 components :

- A standard HandyMax size vessel, which is about US$ 40 - $45m;
- 1,300 pieces of 100m long 20" (500mm) diameter X80/ERW steel pipe, which is a relatively standard pipe for oil & gas that can be safely pressured to 3,600psi; and
- Assembly of the pipe, welding, manifolds, controls, etc into a HandyMax size vessel.

The total cost is summarised in Figure 4.

**Figure 4 : CNG Costs**

| | |
|---|---|
| Vessel | US$ 45m |
| Pipe | US$ 50m |
| Assembly, etc | US$ 45m |
| **TOTAL** | **US$ 140m** |

Source : GEV

GEV announced, on 3 July 2019, that supply of the first vessel will take about 30 months, and that each subsequent vessel will take a further 4 months to deliver.

A HandyMax size vessel sails at 14 knots, which means it covers 623km in a day.

The standard cost for daily operation is US$ 8k/day, according to Moore & Stephens, 2017 survey.

In our analysis, Beer & Co has also assumed :

- A single vessel operates for 330 days a year, with one month for lay-up and maintenance; and
- The vessel is fuelled by gas and uses just under 1MMscf/day (based on fuel cost data).

Each vessel is able to carry 200MMscf, so the greater the distance the greater the number of vessels required.

In our analysis, Beer & Co has further assumed that a CNG Optimum vessel is amenable to debt finance :

- 80% of capital value;
- 6 year term;
- 5.0% annual interest.

It takes 30 months from order to delivery of vessel, with payment terms :

- 20% or US$ 28m, upon order
  - This may require GEV (or 3rd party) equity; while later payments can be debt funded
- 40%, or US$ 56m, after 12 months; and
- The balance, US$ 56m, upon delivery.

# Contracts

GEV has announced 5 different Expressions of Interest in using the CNG Optimum technology, and it now needs to convert these into contracts.

## Brazil

On 4 July 2019, GEV announced that it has appointed GAIA as its Brazilian country associate and that GEV and GAIA were working together to identify, evaluate and develop prospective CNG projects in Brazil.

Brazil is regarded as a highly attractive market opportunity :

- As indicated in Figure 5, there are several major oil and gas companies operating in Brazil's Santos & Campos Basins;
- Also, regional gas markets of Rio De Janeiro & São Paulo are within a half-day sail (~300 km) of GEV's gas supply targets;
- Santos and Campos Basins have many billion-barrel oil & gas fields, with an estimated 1,000mmscf/day of associated gas being reinjected;

**Figure 5 : Brazil offshore oil & gas**


Source : GEV ASX announcement, 4 July 2019

- Brazil's total gas consumption was estimated to be 31B $m^3$ in 2017, which is projected to grow, according to Rystad Energy's 11 July 2018 report, to 39B $m^3$ by 2025 and 44B $m^3$ by 2030, while supply from Bolivia, which is currently 11B $m^3$ is projected to fall due to field decline;
- There are currently 2 pipelines carrying gas onshore, but these are full and while a third pipeline, doubling annual capacity to 13.3B $m^3$, is expected to be operating in 2020;
- Brazil currently imports LNG, with the volume varying largely with the amount of Hydro electricity generated, with the price being a discount to Asian prices.

## PNG (Twinza)

On 16 August 2018, GEV announced that it had executed a Heads of Agreement with Twinza Oil for GEV and Twinza to jointly undertake a Pre-Feasibility Study on the commercialisation of gas from the Pasca A field using marine compressed natural gas.

As shown in Figure 6, Pasca A is in the Gulf of Papua.

The Pasca A field is designed to produce 125MMscf/day, with first liquids production expected in 2021 Q1.

**Figure 6 : Twinza, Gulf of Papua**


Source : GEV ASX announcement, 16 Aug 2018

In Beer & Co.'s view, while PNG may be well supplied with gas, this project has significant potential for GEV :

- Due to the supply available in PNG, the gas from Pasca field has very little economic value; and
- There are many islands in PNG and nearby in Australia which use diesel power for reliable energy supply, while cities in northern Australia may also be markets.

## India

On 17 September 2018, GEV announced that it had executed a Heads of Agreement (HoA) with Indian Oil Corporation to begin negotiations on a Gas Sale Agreement for the supply of ~220MMscf per day to the west coast of India, as indicated in Figure 7.

**Figure 7 : Gas to west coast India**


Source : GEV ASX announcement, 17 September 2018

The indicative terms of the Gas Sales Agreement include :

- Supply of ~220MMscf per day to the west coast of India;
- Delivered gas price: Linked to the Brent crude oil price;
- First gas supply: Late 2021;
- Term: 20 years.

GEV had previously announced similar agreements, including :

- 8 March 2018 : a HoA with the National Iranian Gas Company for a 20-year sale and purchase of ~240 MMscf/d) from the Port of Chabahar, Iran;
  - Due to subsequent US sanctions, this is no longer being pursued;
- 22 August 2018 : the appointment of Lewis Affleck as a Strategic Adviser on Middle East gas supply. Mr Affleck was Managing Director of Maersk Oil Qatar BV in Doha, Qatar, from 2010 to 2018.

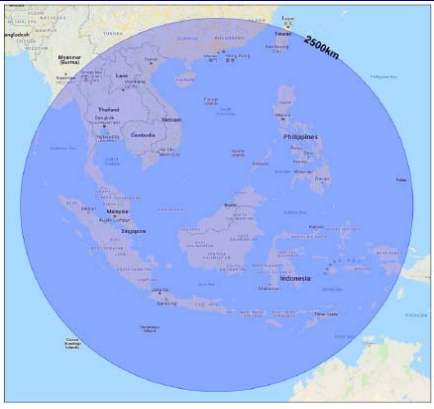
In Beer & Co.'s view, gas supply from Middle East to India would be more suited to a pipeline, but the geo-political situation is not amenable, so the flexibility of ship based supply is required.

## Malaysia

On 17 August 2018, GEV announced that it had signed a Letter of Intent with Tamarind Resources to jointly identify, evaluate and pursue an interest in / operatorship of gasfields in the Malaysian region for commercialisation using GEV's CNG Optimum technology.

A potential offshore gasfield had been identified, which is being actively pursued with the appropriate authorities. There are many others in the region, as indicated by Figure 8, which also shows significant demand within a commercial distance.

**Figure 8 : Malaysian opportunities**




Source : GEV ASX announcement, 17 August 2018

In Beer & Co.'s view, this is the most entrepreneurial of the GEV commercialisation initiatives and requires the most work.

At present, Beer & Co feels that the parameters required to value a contract are still too uncertain.

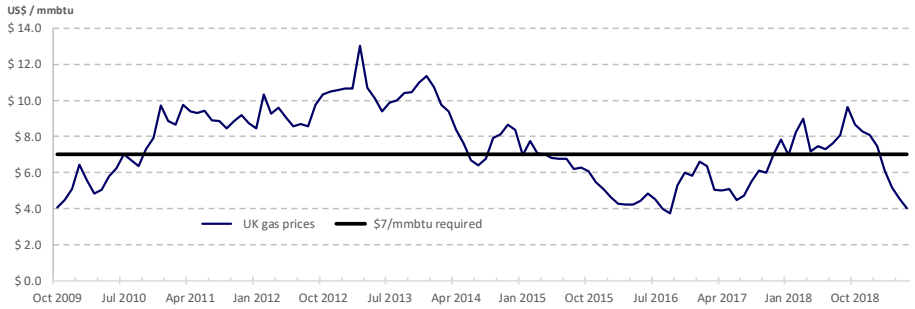
## United Kingdom

GEV has made announcements on gas supply to the UK :

- On 18 May 2017, GEV announced an equity investment in Meridian Holdings to secure port capacity of 300MMscf/day at a terminal to be constructed on the west coast for LNG imports, given declining gas volumes from the North Sea;
  - GEV stated that it had identified supply opportunities from the Atlantic Basin
  - GEV announced on 21 June 2017 that definitive agreements with Meridian has been finalised, and GEV had secured a 5% equity stake;
- On 9 October 2017, GEV announced that it had
  - Appointed a project director for the Atlantic CNG project and opened an office in London;
  - Appointed Gas Strategies Group to review gas sourcing opportunities; and
  - Selected Genesis Oil & Gas Consultants to review options for CNG gas loading and shipping from multiple gas sources through to CNG unloading at Port Meridian.
- On 15 July 2019, GEV announced that Meridian Holdings had received a proposal to acquire the business from an infrastructure investor; and
- On 21 December 2018, GEV announced that :
  - The conditions precedent deadline had been extended to 31 December 2019; and
  - The date for commercial operability had been extended to 1 January 2023.

In Beer & Co.'s view, UK gas prices need to be at least $7 for LNG or CNG imports to be economic, and Chart 9 shows that while this price has been in place, current prices are now lower.

**Figure 9 : Gas prices in UK**




Source : Ofgem (UK Office of Gas and Electricity Markets), IRESS (for GBP-USD), Beer & Co

As UK prices are now too low, Beer & Co believes that this project is now "on ice" and could re-emerge if pricing was amenable.

Accordingly, Beer & Co does not include any value in this analysis.

# Potential Valuation

GEV is now focussed on securing firm contracts from those discussed above, and potentially others.

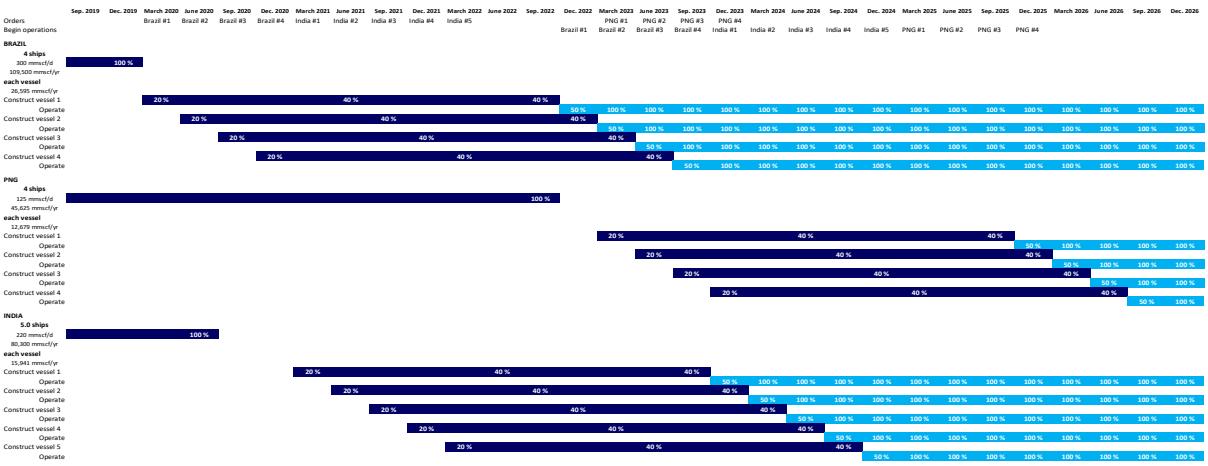
Once contracts are secured, the major constraints on realising value are :

- The 30 months it will take to deliver the first vessel; and
- The requirement for GEV (or the contracting entity) to raise equity of about $A 45m (US$ 28m, being 20% of US$ 140m, and AUD-USD -0.675, plus costs) for each vessel, with some potential contracts requiring many vessels.

Figure 10 shows the projections used by Beer & Co in this analysis. In summary :

- Brazil is the priority, as the discussion above showed that it is well defined and very attractive;
- India ranks second, partly because it is bigger and in Beer & Co.'s view, the contract flow will be more significant after other contracts have been in operation and generating revenue;
- Beer & Co has included PNG as the third but has not included other possibilities.

**Figure 10 : Beer & Co.'s projected ship construction and revenue projections, by time**




Source : Beer & Co estimates

## Potential Value - Brazil

Figure 11 summarises the key data and assumptions used to value the potential contract in Brazil. The keys are :

- Revenue is assumed to be a discount to historic LNG prices indicated in Figure 10, with some of this discount accruing to GAIA, GEV's marketing partner;
- Gas cost is more speculative, but has been assumed to be a value that provides incentive to supply gas that otherwise would not have any value;
- Other parameters are taken from GEV's announcement to the ASX on 4 July 2019.

**Figure 11 : Brazil**

| | |
|---|---|
| distance | 300 km |
| Gas supply | 300 mmscf/d |
| Annual Gas | 104 PJ |
| Ships required | 4 ships |
| First Gas | December 2022 |
| Buy | US$ 3.00/mscf |
| Sell | US$ 6.50/mscf |
| Project Life | 20 years |

Source :GEV, Beer & Co

Figure 12 shows Beer & Co.'s projections for GEV's potential Brazil project, showing :

- Gas supply ramp-up and down, after a 20 year project life;
- Both total capital payments for the ships and also the payments after finance, showing the equity payment and repayment of capital, along with interest.

## Figure 12 : Beer & Co.'s projections for GEV's Brazil project, 100% basis

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | 2030-31 | 2041-42 | 2042-43 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gas sales | 0 MMscf | 0 MMscf | 0 MMscf | 29,919 MMscf | 103,055 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 106,380 MMscf | 54,021 MMscf |
| Total Revenue | US$ 0m | US$ 0m | US$ 0m | US$ 194m | US$ 670m | US$ 691m | US$ 691m | US$ 691m | US$ 691m | US$ 691m | US$ 691m | US$ 691m | US$ 691m | US$ 432m |
| Gas purhcase cost | US$ 0m | US$ 0m | US$ 0m | (US$90m) | (US$309m) | (US$319m) | (US$319m) | (US$319m) | (US$319m) | (US$319m) | (US$319m) | (US$319m) | (US$319m) | (US$199m) |
| shipping cost | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$47m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$30m) |
| E B I T D A | US$ 0m | US$ 0m | US$ 0m | US$ 91m | US$ 314m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 202m |
| Dep'cn | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | US$ 0m | US$ 0m |
| Interest | US$ 0m | US$ 0m | US$ 0m | (US$3m) | (US$21m) | (US$20m) | (US$16m) | (US$13m) | (US$9m) | (US$5m) | (US$1m) | US$ 0m | US$ 0m | US$ 0m |
| P B T | US$ 0m | US$ 0m | US$ 0m | US$ 74m | US$ 255m | US$ 266m | US$ 270m | US$ 274m | US$ 277m | US$ 281m | US$ 285m | US$ 286m | US$ 324m | US$ 202m |
| Tax | US$ 0m | US$ 0m | US$ 0m | (US$25m) | (US$87m) | (US$91m) | (US$92m) | (US$93m) | (US$94m) | (US$96m) | (US$97m) | (US$97m) | (US$110m) | (US$69m) |
| N P A T | US$ 0m | US$ 0m | US$ 0m | US$ 49m | US$ 168m | US$ 176m | US$ 178m | US$ 181m | US$ 183m | US$ 186m | US$ 188m | US$ 189m | US$ 214m | US$ 133m |
| **Project cashflow, pre-tax, finance** | (US$56m) | (US$112m) | (US$168m) | (US$133m) | US$ 314m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 324m | US$ 202m |
| **Net Cashflow, after Finance, tax** | (US$56m) | (US$56m) | US$ 0m | US$ 55m | US$ 144m | US$ 145m | US$ 144m | US$ 142m | US$ 141m | US$ 140m | US$ 204m | US$ 226m | US$ 214m | US$ 133m |

Source : Beer & Co estimates

The Net Present Value of the cashflows shown as "after finance, after tax", using a discount rate of 10%, is US$ 983m.

Note that Beer & Co projects 4 ships are required for this contract and that, as explained above, GEV will need to raise $A 45m in equity for each ship, or a total of $A 180m, to enter into this contract.

Beer & Co assumes that the gas purchase price of $3.0/mmbtu allows for on-load, while Brazil has significant spare capacity as its LNG import facilities, so capital expenditure should be low.

This equity requirement is about 3x GEV's current market capitalisation.

## Potential Value - India

As indicated in Figure 10, Beer & Co has assumed that the contract to supply gas into India is the second contract executed, as :

- GEV has been working on this supply for more than 18 months;
- The market seems obvious as oil & gas producers in the Middle East struggle to find uses for their by-product gas production, while energy demand in India is large and growing rapidly.

Figure 13 shows the key parameters in this valuation, which are taken from GEV's ASX announcements and consistent with the data in Figure 11.

### Figure 13 : India

| | |
|---|---|
| distance | 1,250 km |
| Gas supply | 220 mmscf/d |
| Annual Gas | 76 PJ |
| Ships required | 5 ships |
| First Gas | December 2023 |
| Buy | US$ 3.00/mscf |
| Sell | US$ 7.50/mscf |
| Project Life | 20 years |

Source :GEV, Beer & Co

Figure 14 shows Beer & Co.'s projections for GEV's potential supply into India, covering gas supply ramp-up and down, along with capital flows.

## Figure 14 : Beer & Co.'s projections for GEV's India project, 100% basis

| | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | 2030-31 | 2041-42 | 2042-43 | 2043-44 | 2044-45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gas sales | 0 MMscf | 0 MMscf | 0 MMscf | 17,933 MMscf | 71,734 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 79,704 MMscf | 47,424 MMscf | 598 MMscf |
| Total Revenue | US$ 0m | US$ 0m | US$ 0m | US$ 135m | US$ 538m | US$ 598m | US$ 598m | US$ 598m | US$ 598m | US$ 598m | US$ 598m | US$ 598m | US$ 598m | US$ 418m | US$ 30m |
| Gas purhcase cost | US$ 0m | US$ 0m | US$ 0m | (US$54m) | (US$215m) | (US$239m) | (US$239m) | (US$239m) | (US$239m) | (US$239m) | (US$239m) | (US$239m) | (US$239m) | (US$167m) | (US$12m) |
| shipping cost | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$55m) | (US$61m) | (US$61m) | (US$61m) | (US$61m) | (US$61m) | (US$61m) | (US$61m) | (US$61m) | (US$43m) | (US$3m) |
| E B I T D A | US$ 0m | US$ 0m | US$ 0m | US$ 67m | US$ 268m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 208m | US$ 15m |
| Dep'cn | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$44m) | (US$47m) | (US$47m) | (US$47m) | (US$47m) | (US$47m) | (US$47m) | US$ 0m | US$ 0m | US$ 0m | US$ 0m |
| Interest | US$ 0m | US$ 0m | US$ 0m | (US$1m) | (US$20m) | (US$26m) | (US$22m) | (US$17m) | (US$13m) | (US$8m) | (US$3m) | US$ 0m | US$ 0m | US$ 0m | US$ 0m |
| P B T | US$ 0m | US$ 0m | US$ 0m | US$ 51m | US$ 203m | US$ 225m | US$ 229m | US$ 233m | US$ 238m | US$ 243m | US$ 248m | US$ 297m | US$ 297m | US$ 208m | US$ 15m |
| Tax | US$ 0m | US$ 0m | US$ 0m | (US$15m) | (US$61m) | (US$67m) | (US$69m) | (US$70m) | (US$71m) | (US$73m) | (US$74m) | (US$89m) | (US$89m) | (US$62m) | (US$4m) |
| N P A T | US$ 0m | US$ 0m | US$ 0m | US$ 36m | US$ 142m | US$ 157m | US$ 160m | US$ 163m | US$ 167m | US$ 170m | US$ 174m | US$ 208m | US$ 208m | US$ 146m | US$ 10m |
| **Project cashflow, pre-tax, finance** | (US$56m) | (US$140m) | (US$224m) | (US$157m) | US$ 212m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 297m | US$ 208m | US$ 15m |
| **Net Cashflow, after Finance, tax** | (US$56m) | (US$84m) | US$ 0m | US$ 46m | US$ 129m | US$ 120m | US$ 118m | US$ 117m | US$ 116m | US$ 114m | US$ 158m | US$ 208m | US$ 208m | US$ 146m | US$ 10m |

Source : Beer & Co estimates

The Net Present Value of the cashflows shown as "after finance, after tax", using a discount rate of 10%, is US$ 782m.

The lesser value than the Brazil contract is due to :

- A larger investment required (US$ 140m, or $A 210m, as 5 ships are required); and
- Less gas shipped, with longer voyage times; and
- The contract comes into effect later.

## Potential Value - PNG

As indicated in Figure 10, Beer & Co has assumed that the contract to supply gas into island of PNG and nearby is the third contract executed.

Figure 15 shows the key assumptions in this analysis.

Figure 16 shows Beer & Co.'s projections for GEV's potential supply into PNG and nearby islands, covering gas supply ramp-up and down, along with capital flows.

The NPV of the cashflows related to equity is US$ 407m.

**Figure 15 : PNG**

| | |
|---|---|
| distance | 1,000 km |
| Gas supply | 125 mmscf/d |
| Annual Gas | 43 PJ |
| Ships required | 4 ships |
| First Gas | December 2025 |
| Buy | US$ 3.00/mscf |
| Sell | US$ 7.50/mscf |
| Project Life | 20 years |

Source :GEV, Beer & Co

**Figure 16 : Beer & Co.'s projections for GEV's PNG project, 100% basis**

| | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | 2030-31 | 2041-42 | 2042-43 | 2043-44 | 2044-45 | 2045-46 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gas sales | 0 MMscf | 0 MMscf | 0 MMscf | 14,264 MMscf | 49,130 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 50,715 MMscf | 19,810 MMscf |
| Total Revenue | US$ 0m | US$ 0m | US$ 0m | US$ 107m | US$ 368m | US$ 380m | US$ 380m | US$ 380m | US$ 380m | US$ 380m | US$ 380m | US$ 380m | US$ 380m | US$ 238m |
| Gas purhcase cost | US$ 0m | US$ 0m | US$ 0m | (US$43m) | (US$147m) | (US$152m) | (US$152m) | (US$152m) | (US$152m) | (US$152m) | (US$152m) | (US$152m) | (US$152m) | (US$95m) |
| shipping cost | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$47m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$49m) | (US$31m) |
| E B I T D A | US$ 0m | US$ 0m | US$ 0m | US$ 50m | US$ 174m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 112m |
| Dep'cn | US$ 0m | US$ 0m | US$ 0m | (US$14m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$37m) | (US$0m) | US$ 0m | US$ 0m | US$ 0m | US$ 0m |
| Interest | US$ 0m | US$ 0m | US$ 0m | (US$1m) | (US$19m) | (US$19m) | (US$12m) | (US$5m) | (US$0m) | US$ 0m | US$ 0m | US$ 0m | US$ 0m | US$ 0m |
| P B T | US$ 0m | US$ 0m | US$ 0m | US$ 35m | US$ 118m | US$ 123m | US$ 130m | US$ 137m | US$ 142m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 112m |
| Tax | US$ 0m | US$ 0m | US$ 0m | (US$10m) | (US$35m) | (US$37m) | (US$39m) | (US$41m) | (US$42m) | (US$54m) | (US$54m) | (US$54m) | (US$54m) | (US$34m) |
| N P A T | US$ 0m | US$ 0m | US$ 0m | US$ 24m | US$ 82m | US$ 86m | US$ 91m | US$ 96m | US$ 99m | US$ 125m | US$ 125m | US$ 125m | US$ 125m | US$ 78m |
| **Project cashflow, pre-tax, finance** | (US$56m) | (US$112m) | (US$168m) | (US$174m) | US$ 174m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 179m | US$ 112m |
| **Net Cashflow, after Finance, tax** | (US$56m) | (US$56m) | US$ 0m | US$ 34m | US$ 67m | US$ 54m | US$ 52m | US$ 66m | US$ 136m | US$ 125m | US$ 125m | US$ 125m | US$ 125m | US$ 78m |

Source : Beer & Co estimates

## Potential Value - Other / further

Beer & Co expects that GEV will secure further contracts than the 3 which have been valued. However, any further contracts will be subsequent to those analysed and as indicated in Figure 17, which summarises the key valuations from the discussion, the NPV will be less.

Figure 17 can be used to get a feel for the potential value of later contracts.

**Figure 17 : Summary**

| | Brazil | PNG | India |
|---|---|---|---|
| distance | 300 km | 1,000 km | 1,250 km |
| Gas supply | 300 mmscf/d | 125 mmscf/d | 220 mmscf/d |
| Annual Gas | 104 PJ | 43 PJ | 76 PJ |
| Ships required | 4 ships | 4 ships | 5 ships |
| First Gas | December 2022 | December 2025 | December 2023 |
| Buy | US$ 3.00/mscf | US$ 3.00/mscf | US$ 3.00/mscf |
| Sell | US$ 6.50/mscf | US$ 7.50/mscf | US$ 7.50/mscf |
| Project Life | 20 years | 20 years | 20 years |
| **NPV (100%)** | **US$ 983m** | **US$ 407m** | **US$ 782m** |

Source : Beer & Co estimates

# Beer & Co.'s valuation of GEV

## Introduction

The discussion above showed Beer & Co.'s estimate of the value of the three potential gas supply agreements announced by GEV that have sufficient data to enable an estimate to be made.

It is possible to add the value of these contract to derive a value for GEV. However, the value for GEV needs to consider the financing of each contract, including :

- How each contract will be structured, allocating the potential economic gain among the parties; and
- How each contract will be financed.

These 2 issues are related.

## Brazil

In this analysis, Beer & Co has assumed that GEV is able to raise $A 180m in new equity to be able to fund 4 ships for the Brazil contract.

We have made this assumption as :

- Beer & Co.'s interpretation of GEV's announcements is that this contract will be pursued though the raising of equity rather than as a Joint Venture with the other parties, which brings it own issues of how much it will cost the potential JV partners to "buy in"; and
- Our analysis has allowed for the gas supplier and gas purchaser to secure attractive margins for their own business.

## India

In this analysis, Beer & Co has assumed that the potential contract to supply gas into India is executed in a different manner to Brazil due to :

- The capital investment required is more significant and, in Beer & Co.'s view, the equity GEV needs to raise for Brazil is about 3x its current market capitalisation, which is a significant stretch and probably leaves little appetite for a larger raising when investors are not able to clearly see the financial returns as the Brazil project will not yet be generating cash; and
- Given recent geo-political issues, GEV may be better placed to effectively lease the technology to the contracting parties and not take on any political exposure.

Accordingly, in this analysis, Beer & Co has assumed that GEV is paid a "technology fee" of $1.50/mmbtu.

Further, Beer & Co has assumed that this technology fee is paid to an Australian entity, which pays tax on the revenue received, generating franking credits.

The NPV of the after-tax cashflows from a technology fee of $1.50.mmbtu is US$ 578m, or about ¾ of the contract NPV.

## PNG

Figure 10 shows that Beer & Co has assumed a new ship contract each quarter. It also shows that Beer & Co has allowed for a small gap between delivery of the ships for the Indian contract and those for PNG. This gap is to allow for slippages, as GEV's 3 July 2019 ASX announcement provided for a 4 month gap between ships.

This lag also means that GEV is generating revenue from its Brazil contracts before committing capital to PNG which would otherwise require new equity to be raised.

## GEV projected cashflows in total

Figure 18 shows Beer & Co.'s projections for GEV in total, collecting the net cashflows from each of the 3 contracts discussed together with the finance outlined immediately prior. It shows a jump in net cash after 6 - 7 years when the debt, which is organised on a vessel by vessel basis, rather than a contract basis, is extinguished.

Figure 18 shows the Beer & Co.'s projected equity raisings and the resulting net cash.

**Figure 18 : Beer & Co.'s projections for GEV**

| AUD m | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 | 2030-31 | 2031-32 | 2032-33 | 2033-34 | 2044-45 | 2045-46 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Brazil** | | | | | | | | | | | | | | | | | |
| Gas supplied | 0 PJ | 0 PJ | 0 PJ | 28 PJ | 98 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 101 PJ | 0 PJ | 0 PJ |
| Net AUD cash | (80) | (80) | 0 | 78 | 206 | 207 | 205 | 203 | 201 | 200 | 292 | 323 | 323 | 323 | 323 | 0 | 0 |
| **India** | | | | | | | | | | | | | | | | | |
| Gas supplied | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 17 PJ | 68 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 76 PJ | 0 PJ | 0 PJ |
| Net AUD cash | 0 | 0 | 0 | 0 | 27 | 108 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 18 | 0 |
| **PNG** | | | | | | | | | | | | | | | | | |
| Gas supplied | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 14 PJ | 45 PJ | 48 PJ | 48 PJ | 48 PJ | 48 PJ | 48 PJ | 48 PJ | 48 PJ | 48 PJ | 12 PJ |
| Net AUD cash | 0 | 0 | 0 | (80) | (80) | 0 | 49 | 95 | 77 | 74 | 94 | 194 | 195 | 195 | 195 | 179 | 112 |
| **GEV** | | | | | | | | | | | | | | | | | |
| Corporate | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (1) |
| Equity raised | 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Australian taxes | 0 | 0 | 0 | 0 | 12 | 46 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 8 | 0 |
| Cash / debt | 95 | 13 | 10 | 6 | 156 | 439 | 765 | 1,135 | 1,486 | 1,831 | 2,289 | 2,878 | 3,469 | 4,059 | 4,649 | 10,121 | 10,167 |

Source : Beer & Co estimates

## Beer & Co.'s valuation of GEV

There are 2 final assumptions required to derive a per share valuation of GEV from the data shown in Figure 18. These are :

- The price at which new equity will need to be issued :
  - Beer & Co has assumed that further equity is raised at 20c/share, with the premium to the current price due to the de-risking of a secure contract, as well as the value in the contract; and
- The risk assigned to each contract, representing degrees of certainty.

Figure 19 shows the risk assigned by Beer & Co and the resulting per share valuation.

**Figure 19 : Beer & Co.'s valuation of GEV**

| **discount rate =** | **10.0 %** | 30 June 2019 | | | 29-Aug-19 |
|---|---|---|---|---|---|
| **AUD** | risk : | 100% | Product | per share | |
| Brazil | **65 %** | $ 1,324m | $ 861m | 67 c | 70 c |
| PNG | **50 %** | $ 540m | $ 270m | 21 c | 22 c |
| India | **60 %** | $ 605m | $ 363m | 28 c | 30 c |
| Other | **30 %** | $ 0m | $ 0m | 0 c | 0 c |
| franking credits | **36 %** | $ 259m | $ 93m | 7 c | 8 c |
| Corporate | **100 %** | ($23m) | ($23m) | (2c) | (2c) |
| Equity raisings | **100 %** | $ 137m | $ 137m | 11 c | 11 c |
| Cash / Debt | **100 %** | $ 3m | $ 3m | 0 c | 1 c |
| TOTAL | | $ 2,845m | $ 1,704m | 133 c | 140 c |
| Shares on issue | | 362.9m | F P O shares | 43.4m | Options |
| | | 911m | to be issued | 8.8m | exercised |

Source : Beer & Co estimates

# Further Considerations

## Time frame

One issue for potential equity investors is that GEV is projected to be about 3 years from net revenue generation, which is a long time for equity markets even though the technical risk is low.

Some indication as to how GEV's share price might respond can be gleaned from the experience of Woodside (WPL.ASX) during the 1980s.

WPL developed the North West Shelf project during the 1980s, making the first sale of domestic gas in 1984 and the first shipments of LNG in 1989. In other words, the LNG shipments were long anticipated, and the technical risk was not great given that the project engineer was Shell, which had developed similar projects previously.

Figure 20 shows how the WPL share price increased progressively over that time, nearly 3x (and a lot more since).

**Figure 20 : WPL share price leading into commissioning of NWS LNG**


Source : IRESS, Beer & Co

## The Chairman's track record

GEV's Executive Chairman, Maurice Brand, has founded 2 companies that have listed on the ASX. Mr Brand founded

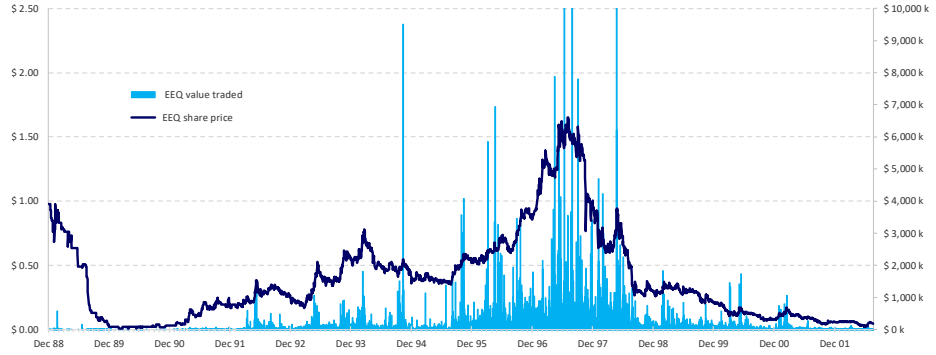
- Energy Equity (EEC.ASX) in 1985 (now Energy World Corporation (EWC.ASX)), stepping down as MD in September 2000; and
- LNG Limited after stepping down from EWC, stepping down from LNG Limited on 1 August 2016.

Figure 21 shows the share price and value traded in EEC from its listing in December 1988. Figure 21 shows that the EEC share price recovered from a horror first 12 months, to provide significant out-performance over the next 7 years.

Figure 22 shows a share price that rose and retreated with progress on various projects to use LNG Limited's technology. These included attempts to build an LNG plant in Australia which, during that time became restricted in gas supply due, in part, to 3 LNG projects being developed at roughly the same time.

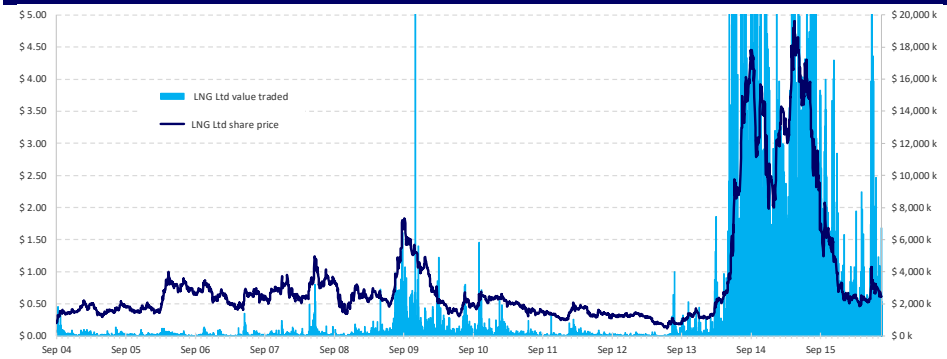
The rise was associated with the firming of projects in USA which became a source of cheap gas and provided returns that, 10 years after the IPO, were more than 20x the IPO price.

**Figure 21 : EEC share price while led by Maurice Brand**




Source : IRESS, Beer & Co

**Figure 22 : LNG share price while led by Maurice Brand**




Source : IRESS, Beer & Co

## Significant further potential

### Ship size

GEV's CNG Optimum 200 technology has approvals for HandyMax sized ships able to carry 200MMscf.

In its November 2017 presentation, GEV featured Optimum 450 concept, able to carry 450MMscf, more than 2x the now approved technology. A larger ship is more efficient in terms of unit capital cost and operating costs.

While, due to load and un-load times, the smaller ship may be more efficient with shorter distances, the larger ship may be more competitive with LNG over middle to longer distances.

However, this remains potential and much more work needs to be done; and this work will be facilitated by having the Optimum 200 ships in operation.

### Opportunistic Supply

Until GEV is generating free cash from supply contracts, which we expect will be about 3 years from now, GEV will be constrained by the need to secure high quality contracts to facilitate debt financing.

Securing high quality contracts requires sharing some of the value with the other parties.

Being able to pursue contracts opportunistically, including from fields that have been abandoned such as in Malaysia, should provide higher margins.

## Sensitivity Analyses

The factor to which Beer & Co.'s valuation of GEV is most sensitive is the spread between the purchase price of gas, and its sale price.

In addition, our assumed risking factors has a significant impact.

Figure 23 shows the impact of both factors.

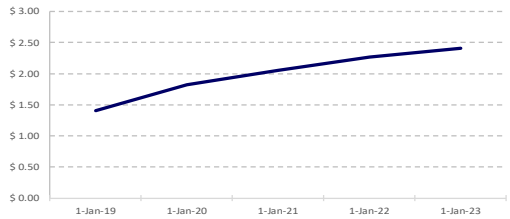
**Figure 23 : Sensitivity**

| | Risked | Un-risked |
|---|---|---|
| base case | **$ 1.40** | $ 2.19 |
| $1.0 extra margin | $ 1.79 | $ 2.80 |

Source : Beer & Co estimates

Over time, the risking applied should reduce if the project is delivered as expected. This is shown in Figure 24, which shows an increase of 70% in Beer & Co.'s valuation, partly due to the impact of getting closer to positive cashflows and partly due to progressive de-risking.

**Figure 24 : Value growth over time**




Source : Beer & Co estimates

This increase in valuation shown in Figure 24 takes no account of further contracts, which Beer & Co expects GEV will achieve.

# Conclusions

GEV now has regulatory approval for its own proprietary technology, CNG optimum.

GEV's IP is largely protected by the need for regulatory approval.

The CNG Optimum technology is able to buy gas cheaply from off-shore fields, that are either stranded or need to re-inject gas which is produced as a by-product from oil production, and sell this into selected high value gas consuming markets.

There are a number of ways in which value can be generated from the CNG Optimum technology.

The highest value way is :

- Buy stranded gas at about $1 - $2 / mmbtu;
- Deliver it to a market at about $6 - $7 /mmbtu;
- Own vessels able to carry 200 (or more) MMscf (1,000 scf is about 1mmbtu);
- Incur a delivery cost of about $1/mmbtu (plus pay-off the US$ 140m it costs to build a ship); and
- Do this maybe 100 times a year for each vessel, for 20 years.

Beer & Co expects that the technology will be much more valuable in about 3 years from now when :

- It is in commercial operation which, given it takes 30 months from order to delivery of a ship, is expected to be about 3 years from now;
  - Prospective users will be able to observe the ships in operation and more easily see the value; and
- The financial restraints on GEV have been eased as ships are generating cash.

Finally, the Executive Chairman has a track record of delivering significant value growth.

## Beer& Co Research

**Global Energy Ventures (GEV.ASX)** — **August 2019**

| Year ended June | | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 |
|---|---|---|---|---|---|---|---|---|---|
| **Section 1 - P&L** | | | | | | | | | |
| Sales revenue | $A m | 0 | 0 | 0 | 0 | 288 | 1,032 | 1,184 | 1,360 |
| Interest revenue | $A m | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 5 |
| Other revenue | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Revenue** | $A m | 0 | 1 | 0 | 0 | 288 | 1,033 | 1,186 | 1,365 |
| Cost of Goods Sold | $A m | 0 | 0 | 0 | 0 | (153) | (528) | (545) | (629) |
| Royalties | $A m | (1) | (3) | (3) | (3) | (3) | (3) | (3) | (3) |
| Corporate Costs | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exploration Expense | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Operating Expenses | $A m | (1) | (3) | (3) | (3) | (156) | (530) | (547) | (631) |
| **Total Operating Expenses** | $A m | (2) | (5) | (5) | (5) | (312) | (1,061) | (1,095) | (1,262) |
| **EBITDA** | $A m | (2) | (4) | (5) | (5) | (23) | (28) | 91 | 103 |
| Dep'cn & Amort'sn | $A m | (1) | (2) | (2) | (2) | 112 | 447 | 584 | 658 |
| **EBIT** | $A m | (3) | (6) | (7) | (7) | 88 | 418 | 675 | 761 |
| Interest Expense | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | $A m | (1) | (2) | (2) | (2) | 107 | 415 | 554 | 632 |
| **Pre-Tax Profit** | $A m | (4) | (8) | (9) | (10) | 196 | 834 | 1,229 | 1,393 |
| Tax Expense | $A m | (1) | (2) | (2) | (2) | 70 | 275 | 372 | 427 |
| **NPAT** | $A m | (5) | (9) | (11) | (12) | 266 | 1,108 | 1,602 | 1,820 |
| **Section 2 - Key Data** | | | | | | | | | |
| Ordinary shares - year end | m | 362.9 | 1,242 | 1,242 | 1,242 | 1,274 | 1,274 | 1,274 | 1,274 |
| Fully diluted shares on issue | m | 404.0 | 1,274 | 1,274 | 1,274 | 1,274 | 1,274 | 1,274 | 1,274 |
| Weighted # shares | m | 343.4 | 1,023 | 1,242 | 1,242 | 1,270 | 1,274 | 1,274 | 1,274 |
| Earnings per Share | | (0.3c) | (0.1c) | (0.2c) | (0.2c) | 5.5 c | 21.6 c | 29.2 c | 33.5 c |
| Dividends Per Share | | 0.0 c | 0.0 c | 0.0 c | 0.0 c | 0.0 c | 0.1 c | 2.5 c | 4.2 c |
| **Section 3 - Balance Sheet** | | | | | | | | | |
| Cash | $A m | 3 | 92 | 7 | 4 | 0 | 155 | 449 | 787 |
| Receivables | $A m | 0 | 0 | 0 | 0 | 80 | 183 | 239 | 283 |
| Other | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CURRENT ASSETS** | $A m | 3 | 92 | 7 | 4 | 80 | 338 | 688 | 1,069 |
| Receivables | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| P , P & E | $A m | 0 | 83 | 249 | 498 | 892 | 1,002 | 1,196 | 1,452 |
| Intellectual Property | $A m | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Other | $A m | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **NON-CURRENT ASSETS** | $A m | 9 | 92 | 258 | 507 | 901 | 1,011 | 1,205 | 1,461 |
| **TOTAL ASSETS** | $A m | 11 | 184 | 264 | 511 | 981 | 1,350 | 1,893 | 2,530 |
| Payables | $A m | 0 | 0 | 0 | 0 | 13 | 20 | 20 | 27 |
| Debt | $A m | 0 | 0 | 0 | 0 | 72 | 101 | 107 | 160 |
| Other | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CURRENT LIABILITIES** | $A m | 0 | 0 | 0 | 0 | 85 | 122 | 127 | 187 |
| Long Term Debt | $A m | 0 | 0 | 83 | 342 | 626 | 607 | 757 | 949 |
| Other | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Provisions | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **NON-CURRENT LIABILITIES** | $A m | 0 | 0 | 83 | 342 | 626 | 607 | 757 | 949 |
| **TOTAL LIABILITIES** | $A m | 0 | 0 | 83 | 342 | 711 | 729 | 884 | 1,136 |
| **NET ASSETS** | $A m | **11** | **184** | **181** | **169** | **270** | **621** | **1,009** | **1,394** |
| Accumulated Profit (Loss) | $A m | (46) | (48) | (50) | (53) | 17 | 292 | 664 | 1,091 |
| Reserves | $A m | (3) | (3) | (3) | (14) | 18 | 94 | 110 | 68 |
| Contributed Equity | $A m | 61 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| **Total Equity** | $A m | 11 | 184 | 181 | 169 | 270 | 621 | 1,009 | 1,394 |
| **Section 4 - Cashflow** | | | | | | | | | |
| Net Cashflow from operations | $A m | (1) | (2) | (2) | (2) | 132 | 502 | 639 | 734 |
| Net Interest Paid | $A m | 0 | 1 | 0 | 0 | (4) | (31) | (27) | (21) |
| Taxes Paid | $A m | 0 | 0 | 0 | 0 | 0 | (12) | (48) | (53) |
| Change in Working Capital | $A m | 0 | 0 | 0 | 0 | (67) | (96) | (55) | (37) |
| **OPERATING CASHFLOW** | $A m | (1) | (1) | (2) | (2) | 61 | 363 | 509 | 623 |
| R&D + Feasibility | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maintenace Capex | $A m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Expansion Capex | $A m | (83) | (83) | 0 | (83) | (83) | 0 | 0 | 0 |
| **PPE Acquisitions (Total Capex)** | $A m | (83) | (83) | 0 | (83) | (83) | 0 | 0 | 0 |
| PPE Divestments | $A m | (83) | (83) | 0 | (83) | (83) | 0 | 0 | 0 |
| **INVESTING CASHFLOW** | $A m | (166) | (166) | 0 | (166) | (166) | 0 | 0 | 0 |
| Change in Equity | $A m | 0 | 165 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dividends Paid | $A m | 0 | 0 | 0 | 0 | 0 | (1) | (32) | (53) |
| Change in Debt | $A m | 0 | 0 | 83 | 259 | 356 | 11 | 155 | 246 |
| **FINANCING CASHFLOW** | $A m | 0 | 165 | 83 | 259 | 356 | 9 | 123 | 192 |

### Operational assumptions

| Year ended June | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 |
|---|---|---|---|---|---|---|---|---|
| AUD/USD | 0.675 | 0.675 | 0.675 | 0.675 | 0.675 | 0.675 | 0.675 | 0.675 |
| LNG price (US$/mmbtu) | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 |

| Contracts in place | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 |
|---|---|---|---|---|---|---|---|---|
| **Brazil** | | | | | | | | |
| Gas Supplied | 0 PJ | 0 PJ | 0 PJ | 28 PJ | 98 PJ | 101 PJ | 101 PJ | 101 PJ |
| purchase price, USD/mscf | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 |
| sales price, USD/mscf | $ 6.50 | $ 6.50 | $ 6.50 | $ 6.50 | $ 6.50 | $ 6.50 | $ 6.50 | $ 6.50 |
| **India** | | | | | | | | |
| Gas Supplied | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 17 PJ | 68 PJ | 76 PJ | 76 PJ |
| technology fee, USD/mscf | $ 1.50 | $ 1.50 | $ 1.50 | $ 1.50 | $ 1.50 | $ 1.50 | $ 1.50 | $ 1.50 |
| **PNG** | | | | | | | | |
| Gas Supplied | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 0 PJ | 14 PJ | 45 PJ |
| purchase price, USD/mscf | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 | $ 3.00 |
| sales price, USD/mscf | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 | $ 7.50 |
| **Total** | | | | | | | | |
| Gas Supplied | 0 PJ | 0 PJ | 0 PJ | 28 PJ | 115 PJ | 169 PJ | 190 PJ | 221 PJ |
| Net Revenue, AUD m | 0 | 0 | 0 | 139 | 516 | 639 | 740 | 940 |

Note : 1PJ = c. 948,000 mscf (or 948mmscf)

### Valuation

**discount rate = 10.0 %**

| | risk : | 30 June 2019 100% | Product | per share | 29-Aug-19 |
|---|---|---|---|---|---|
| Brazil | 65 % | 1,324 | 861 | 67 c | 70 c |
| PNG | 50 % | 540 | 270 | 21 c | 22 c |
| India | 60 % | 605 | 363 | 28 c | 30 c |
| Other | 30 % | 0 | 0 | 0 c | 0 c |
| franking credits | 36 % | 259 | 93 | 7 c | 8 c |
| Corporate | 100 % | (23) | (23) | (2c) | (2c) |
| Equity raisings | 100 % | 137 | 137 | 11 c | 11 c |
| Cash / Debt | 100 % | 3 | 3 | 0 c | 1 c |
| TOTAL | | $ 2,845m | $ 1,704m | 133 c | **140 c** |
| Shares on issue | | 362.9m | F P O shares | 43.4m | Options |
| | | 911m | to be issued | 8.8m | exercised |

### Financial Ratios

| Year ended June | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
|---|---|---|---|---|---|---|---|
| Revenue | $A m | 1 | 0 | 0 | 288 | 1,033 | 1,186 |
| EBITDA | $A m | (4) | (5) | (5) | (23) | (28) | 91 |
| EBIT | $A m | (6) | (7) | (7) | 88 | 418 | 675 |
| NPAT (reported) | $A m | (9) | (11) | (12) | 266 | 1,108 | 1,602 |
| Adjusted EPS (cps) | | (0.1c) | (0.2c) | (0.2c) | 5.5 c | 21.6 c | 29.2 c |
| EPS Growth (%) | | | (22%) | (16%) | 2,893 % | 293 % | 35 % |
| DPS (c) | | 0.0 c | 0.0 c | 0.0 c | 0.0 c | 0.1 c | 2.5 c |
| Dividend Yield (%) | | 0 % | 0 % | 0 % | 0 % | 0 % | 1 % |
| PE adj. (x) | x | (115.3) | 0.0 | 0.0 | 3.6 | 0.9 | 0.7 |
| EV / EBITDA (x) | x | (14.7) | 19.9 | (15.4) | (25.4) | (33.7) | 8.8 |
| EV / EBIT (x) | x | (10.5) | 13.7 | (10.3) | 6.7 | 2.3 | 1.2 |
| Gearing (%) | | 0 % | 31 % | 67 % | 71 % | 52 % | 46 % |
| Return on Assets | | (3%) | (3%) | (1%) | 9 % | 31 % | 36 % |
| Return on Equity | | (5%) | (6%) | (7%) | 98 % | 179 % | 159 % |
| EBITDA Margin (%) | | n/a | n/a | n/a | n/a | (8%) | (3%) |
| Interest Cover (x) | x | n/a | n/a | n/a | n/a | n/a | n/a |

### Major shareholders, and Management

| | Shares | | Perf. Rights | 40c ops May-20 | 10c ops May-20 | 21c ops Jun-20 |
|---|---|---|---|---|---|---|
| Regal Funds Management | | | | | | |
| Maurice Brand | 22.250m | 6.1 % | 5.000m | 2.115m | 0.629m | 0.333m |
| Martin Carolan | 10.756m | 3.0 % | 7.000m | 2.225m | | |
| Jens Hensen | 3.280m | 0.9 % | | | | |
| Paul Garner | 13.100m | 3.6 % | 1.250m | 0.800m | 0.560m | |
| Garry Triglavcanin | 11.940m | 3.3 % | 3.750m | 0.995m | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Free Cashflow** | $A m | (84) | (84) | (2) | (85) | (22) | 362 | 477 |
| **Net Cashflow** | $A m | (84) | 82 | 81 | 174 | 333 | 372 | 632 |

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