

## **QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 30 SEPTEMBER 2018**

During the September 2018 Quarter, developer of global integrated compressed natural gas (CNG) projects, Global Energy Ventures Ltd (ASX: GEV) pursued commercialisation and gas supply opportunities while testing of its CNG Optimum 200 ship design in compliance with the American Bureau of Shipping's Rules and Guidelines for approving CNG ships progressed well, along with meetings with ship yards in Korea; China and Singapore.

## **During the Quarter, GEV:**

- Successfully completed the three significant tests required for ABS Full Class Approval for its CNG Optimum 200MMscf ship design
- Achieved Proof of Concept for the CNG Optimum ship design
- Commenced the final suite of tests which are cyclic fatigue tests which are schedule to be completed shortly
- Completed all support analysis and documentation for ABS Class approval
- Short listed four ship yards with the capability to build multiple CNG Optimum 200 ships
- Executed a Heads of Agreement with Indian Oil Corporation Limited (IOC) to negotiate a gas sale agreement to supply gas to the Port of Dehaj on the west coast of India
- Appointment of Lewis Affleck as Strategic Advisor for Middle East gas supply
- Presented at the Gas & LNG Middle East Summit, held in Muscat, Oman on 29 & 30 October 2018
- Partnered with Twinza Oil Limited through a Heads of Agreement to evaluate gas commercialisation of the PNG Pasca A field
- Signed a Letter of Intent with Tamarind Resources Pte Ltd to identify, evaluate and pursue opportunities for stranded gas fields in Malaysia
- Obtained approval for an Advance Overseas Finding for its overseas R&D activities
- Submitted its 2018 Tax Return which includes an application for a refundable tax off set of \$1,002,330.
- Finished the quarter with cash at bank of \$3.517 million.

Commenting on the busy quarter, Chairman & CEO Maurice Brand said that "recent GEV progress was material on many fronts but in particular, having now achieved Proof of Concept for the CNG Optimum 200 ship had now removed any uncertainly on the engineering and technical viability for Global marine CNG. GEV is now into the final suite of tests, the 20,000 cycle test being ~ 50% completed, with the last two 6,000 cycle tests to be completed shortly. On completion, GEV will receive final ABS Full Class Approval for the design of the CNG Optimum 200 ship.

#### ABS TESTING MATERIALLY PROGRESSED AND TO BE COMPLETED SHORTLY

Pressure testing of the CNG Optimum pipe was successfully carried out on 10 August 2018 at the C-FER Technologies testing facilities in Edmonton, Alberta, Canada. The test aimed to prove the Optimum pipe can withstand the pressure it will be subjected to while operating in a CNG-O-200 ship, plus a significant safety margin. Whilst the operating pressure of the CNG-O-200 design is 3,600 psi, the pipe passed the test by demonstrating that it could withstand pressures up to 7,548 psi (more than double operating pressure). The pipe comfortably passed this test giving confidence in the overall safety of the CNG Optimum system.

The **Proof of Concept**, "Bend and Friction Tests", were successfully completed in September. The aim of these tests was to verify that the CNG containment pipes in the hold of the ship can be forced together in such a way that the pipes will not move relative to each other, or relative to the ship, even in extreme seas.

The test required applying a downwards force on the pipes (reflective of what would be done in an Optimum ship's hold) to mobilise sufficient friction to prevent relative movement.

The bend test demonstrated that the pipes could be forced together sufficiently to prevent relative movement, even under maximum load. A rig containing stacked pipes that allowed the pipes to be forced together to simulate the pipes in the ship's hold was constructed. This rig was jacked up at either end and the deflections precisely measured. The predicted deflection at the midpoint was 5 mm. The actual deflection as measured was 5.45 mm, which proved the concept worked as predicted. If the pipes did not prevent movement, the defection would have been significantly more (about 4 times more). This proves that the Optimum concept works as designed.

The friction test proved that the required friction was achieved between each pipe. The test required applying a downwards force on the pipes (reflective of what would be done in an Optimum ship's hold - to a pressure of 10 t/square meter), then pulling on the pipe in the middle of the bundle and trying to extract that pipe from the bundle. The force needed to move the pipe relative to the surrounding pipe was the critical measurement and again supported the engineering analysis.

These tests, which GEV refers to as 'Proof of Concept', are at the heart of the international patent applications that have been lodged with the PCT (Patent Cooperation Treaty) authorities and Pakistan (not a PCT country). There are 152 contracting states to the PCT.

Completion of these tests confirmed that the required friction was achieved and that the CNG Optimum storage system works as designed.

Testing has now moved onto the final phase, Cyclic Fatigue Testing. These tests have taken longer due to a number of factors, but all are scheduled to be completed shortly. There are three individual sub-tests required by the ABS Rules and Guidelines. These are:

- Long-term Fatigue Test: This long-term fatigue test requires cycling a representative pressure vessel for ten times the design life of the ship from minimum pressure to the operating pressure. For a 30-year ship life this means that the cycle test must recreate 300-years (20,000 cycles). This is an extremely rigorous test. This test began in September and is now ~ 50% complete.
- Notched Burst Test: This test requires fatiguing a specimen through three times the design life (6,000 cycles) and then bursting the pipe with a machined notch embedded. This is proof of the pipes' ductility.
- Cooled Burst Test: This a test requires fatiguing the specimen through three times the design life (6,000 cycles) and then bursting the pipe after it has been cooled to simulate the temperatures that would result from the Joule-Thompson cooling effect of gas escaping through a crack. This test will be run after the long -term Fatigue test and cycling of the notched burst test are completed. This is the final test and completes all required testing for ABS Class approval for the Optimum 200 design.

GEV has also progressed all key reports that form part of final ABS approvals which include:

- 1. The Hull Structural Evaluation of the CNG Optimum 200 Ship which focuses on the novel midbody section, is complete and concludes that the design meets ABS Rule requirements. ABS carried out an extensive analysis over the past 9 months including both 2D and 3D finite element models. The report is over 200 pages. This was the most critical analysis work from an approval perspective.
- 2. The Risk Assessment and its supporting reports on gas process, safety, and topside design have been submitted to ABS. The Risk Assessment concluded that there were no hazards identified that cause serious concern. This report supports the ABS Approval process.

- 3. Burst Test Report has been submitted to ABS. Friction and Bend test reports are drafted and Cyclic Fatigue test reports being pre-prepared.
- 4. The detailed CNG Optimum 200 ship specification package (180 pages) was issued to the selected four ship yards.

#### **SELECTION OF SHIP YARDS**

GEV is pleased to advise that it has selected four ship yards to provided indicative pricing, construction methodology and delivery schedules based on execution of contracts by 30 June 2019 for an initial four ship order. In order to ensure capability to deliver first CNG ships in 2021/2022, GEV plans to select two yards to work with over the next three months, so as to be in a position to award contacts by 30 June 2019. The timing to the award of contracts is dependent on progress on CNG projects under development.

#### HEADS OF AGREEMENT WITH INDIAN OIL CORPORATION LIMITED

GEV signed a Heads of Agreement (HOA) with the Indian Oil Corporation Limited (IOC) to act in good faith to commence negotiations on a Gas Sale Agreement (GSA) based on the following indicative terms:

- Gas Sales Volume: ~220 MMscf per day (~1.5 mtpa of LNG equivalent)

- Delivered Gas Price: Linked to the Brent crude oil price

First Gas Supply: Late 2021

Term: 20 years

- CNG Import Location: Preferred location being the Port of Dahej, Gulf of Cambay, India.

The HOA contemplates that GEV will deploy a fleet of up to six CNG Optimum 200 ships to deliver the required 220 MMscf of gas per day.

GEV is responsible for securing gas volumes from the Middle East region and is progressing its discussions in sourcing gas.

During the quarter, GEV appointed Lewis Affleck as its Strategic Advisor on Middle East Gas Supply. Lewis was based in Qatar from 2010 to 2018 as Managing Director of Maersk Oil Qatar BV in Doha, Qatar. Prior to that, Lewis was with the BG Group for 14 years in various senior management positions.

On 29 October, 2018, GEV presented at the Oman Gas & LNG Summit held in Muscat. A copy of that presentation was released to the ASX on the 29 October 2018. Due to the limited 20 minutes available for the presentation, the paper focussed on the history of CNG marine, why CNG Optimum is now commercially viable for delivery of gas and the opportunity to deliver gas to west coast India.

#### AGREEMENT WITH TWINZA OIL

GEV signed a Heads of Agreement (HOA) with Twinza Oil Limited (Twinza) to jointly explore a commercialisation plan for the export and sale of gas from the Pasca A field via marine CNG.

The Pasca A field (PPL 328) is located 270km northwest of Port Moresby, in the Gulf of Papua, Papua New Guinea, which Twinza owns and operates. In April 2018, following the successful appraisal drilling of the Pasca-A4 (AD1) well, the field was independently certified by Gaffney Cline and Associates.

The Pasca A field facilities are designed for the production of 125 MMscf/d and first liquids production is currently scheduled in 1Q 2021.

Twinza are in discussions with the PNG Department of Petroleum to obtain a Petroleum Development Licence for Pasca A, which is expected shortly. Following the issue of the Development License, Twinza will proceed to final engineering with a target to achieve a Final Investment Decision by 30 June 2019.

Under terms of the HOA with Twinza:

- GEV and Twinza will jointly work together to undertake a Pre-Feasibility Study to evaluate a commercialisation plan for gas from the PNG Pasca A field via marine CNG for a period of 90 days
- Scope of work outlined in the HOA will focus on defining gas markets and assessing the technical and commercial elements of a CNG project
- The parties have already identified several gas markets located in the east coast of Australia and domestically in PNG which would be candidates to receive CNG supply
- The purpose of the Pre-Feasibility Study is to allow both parties to assess the technical, commercial, safety, and other potential development issues associated with the CNG project
- If both parties agree to continue developing the CNG project, then both parties:
  - May enter into detailed discussions on gas offtake
  - On an optional basis, the parties may agree and enter into discussions to acquire an interest in the other party's project

**GEV** is on schedule to deliver to Twinza the Pre-Feasibility Study in November. GEV has established that viable gas markets are available on Australia's east coast and in PNG. GEV's view is that the Twinza project could support a CNG project to match the Pasca A field's gas production capacity.

### PURSUING MALAYSIAN OPPORTUNITIES WITH TAMARIND RESOURCES

GEV signed a Letter of Intent (LOI) with Tamarind Resources Pte Ltd (Tamarind), an oil and gas operator headquartered in Kuala Lumpur, Malaysia, to jointly identify, evaluate and pursue an interest/operatorship in gas fields in the Malaysian region, using GEV's proprietary CNG Optimum technology and CNG Optimum 200 MMscf ships to export gas to markets within a 2,500km range.

Under the LOI, both parties have already established a commercial case for a particular offshore Malaysian gas field and expressed their interest to the authorities to conduct further due diligence and potential interest/operatorship in such field.

GEV will continue to provide an update of further developments as they occur.

#### **R&D REBATE APPLICATION**

GEV's Advance Overseas Finding Application to the Australian Department of Industry, Innovation and Science for its overseas R&D activities was approved, as announced in September 2018.

GEV has spent more than A\$2.6 million on research and development since the acquisition of the GEV CNG Optimum technology in December 2017. Significant R&D spend has been incurred in North America due to the location of the necessary technical facilities required to develop the technology.

GEV has now has lodged its tax return, which includes an application for a refundable R&D tax offset of \$1,002,330.

#### **FUNDING POSITION**

GEV cash position as at 30 September 2018, was \$3.517 million.

## For further information please contact:

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#### **About Global Energy Ventures Ltd**

The Company's mission is to create shareholder value through the delivery of integrated CNG solutions to global gas markets. CNG is a well proven solution with technical and commercial advantages along with being safe and environmentally friendly. This will be achieved by:

- Continuing the roll out of GEV CNG Optimum ship design and maintaining global leadership in marine CNG technology;
- Pursue multiple CNG projects to improve the probability of success;
- Secure access to strategic gas resources that provides for an integrated CNG gas supply solution;
- Offer CNG project stakeholders flexible commercial arrangements;
- Employ world class management and staff that are leaders in their chosen discipline; and
- Maintain the highest standards of efficiency, safety and environmental responsibility.

+Rule 4.7B

# **Appendix 4C**

## Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

## Name of entity

Global Energy Ventures Ltd

ABN

Quarter ended ("current quarter")

53 109 213 470

30 September 2018

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	_	_
1.2	Payments for		
	(a) research and development	(936)	(936)
	(b) product manufacturing and operating costs	_	_
	(c) advertising and marketing	(8)	(8)
	(d) leased assets	_	_
	(e) staff costs (R&D)	(166)	(166)
	(e) staff costs (non R&D)	(287)	(287)
	(f) administration and corporate costs	(126)	(126)
1.3	Dividends received (see note 3)	<del></del>	_
1.4	Interest received	2	2
1.5	Interest and other costs of finance paid	_	_
1.6	Income taxes paid	_	_
1.7	Government grants and tax incentives	_	_
1.8	Other (project development)	(400)	(400)
1.8	Other	<del></del>	<del></del>
1.9	Net cash from / (used in) operating activities	(1,921)	(1,921)

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<sup>+</sup> See chapter 19 for defined terms

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment	<del></del>	<del></del>
	(b) businesses (see item 10)	<u> </u>	
	(c) investments	_	
	(d) intellectual property	_	
	(e) other non-current assets	_	
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	_	
	(b) businesses (see item 10)	_	
	(c) investments	_	
	(d) intellectual property	_	
	(e) other non-current assets	_	
2.3	Cash flows from loans to other entities	_	
2.4	Dividends received (see note 3)	<del>-</del>	
2.5	Other (provide details if material)	_	
2.6	Net cash from / (used in) investing activities		

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	<del></del>	<del>-</del>
3.2	Proceeds from issue of convertible notes	_	<del>-</del>
3.3	Proceeds from exercise of share options	_	_
3.4	Transaction costs related to issues of shares, convertible notes or options	_	<u> </u>
3.5	Proceeds from borrowings	_	<del>_</del>
3.6	Repayment of borrowings	<del>-</del>	<del></del>
3.7	Transaction costs related to loans and borrowings	<u> </u>	_
3.8	Dividends paid	<del>-</del>	<del></del>
3.9	Other (provide details if material)	_	<u> </u>
3.10	Net cash from / (used in) financing activities		

<sup>+</sup> See chapter 19 for defined terms 1 September 2016

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Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of quarter/year to date	5,380	5,380
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,921)	(1,921)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	_	<del>_</del>
4.4	Net cash from / (used in) financing activities (item 3.10 above)	_	<del>-</del>
4.5	Effect of movement in exchange rates on cash held	58	58
4.6	Cash and cash equivalents at end of quarter	3,517	3,517

Note: Global Energy Ventures Ltd has lodged its tax return, which includes an application for a refundable R&D tax offset of \$1,002,330. This application is supported by an approved Advance Overseas Finding for its overseas R&D activities from Innovation and Science Australia.

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	3,517	5,380
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,517	5,380

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	165
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	
6.3	Include below any explanation necessary to understand the transaction items 6.1 and 6.2	ns included in
Item 6	.1 includes fees, salaries and superannuation paid to directors.	

<sup>+</sup> See chapter 19 for defined terms

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7.	Payments to related entities of the entity and their associates		Current quarter \$A'000
7.1	Aggregate amount of payments to these parti	es included in item 1.2	<del></del>
7.2	Aggregate amount of cash flow from loans to in item 2.3	these parties included	_
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2		
<u> </u>			
8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1	Loan facilities	<del></del>	
8.2	Credit standby arrangements	<del></del>	
8.3	Other (please specify)	<del></del>	
8.4	Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Research and development	997
9.2	Product manufacturing and operating costs	<del>_</del>
9.3	Advertising and marketing	30
9.4	Leased assets	<u> </u>
9.5	Staff costs	655
9.6	Administration and corporate costs	125
9.7	Other (project development)	295
9.8	Total estimated cash outflows	2,102

Note: Global Energy Ventures Ltd has lodged its tax return, which includes an application for a refundable R&D tax offset of \$1,002,330. This application is supported by an approved Advance Overseas Finding for its overseas R&D activities from Innovation and Science Australia.

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10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions \$A'000	Disposals \$A'000
10.1	Name of entity		
10.2	Place of incorporation or registration		
10.3	Consideration for acquisition or disposal		
10.4	Total net assets		
10.5	Nature of business		

## **Performance Shares**

On 7 December 2017, Global Energy Ventures Ltd (GEV) issued 1,850,000 Class A Performance Shares, 2,200,000 Class B Performance Shares, 2,350,000 Class C Performance Shares, 6,250,000 Class D Performance Shares and 3,200,000 Class E Performance Shares (together "Performance Shares"). All Performance Shares remained on issue at the end of the quarter. All Performance Shares expire on 6 December 2022 (Expiry Date) and on achievement of the relevant milestone for each Class of Performance Share, each Performance Share of that class will convert into one ordinary share in the Company. Class A Performance Shares will convert when either (a) a notice to proceed for a contract for the construction of CNG ship(s) for the first project for the marine transportation of compressed natural gas in which GEV has an interest and which is reliant on Sea NG Corporation (SeaNG) Technology (Project) is given (Notice to Proceed Date); or (b) when (i) the 30-day VWAP of GEV Shares exceeds A\$0.35 at any time subsequent to 6 December 2017 (Effective Date); and (ii) GEV obtains ABS Full Approval for construction of a CNG Ship reliant on the Optimum Technology (Optimum CNG Ship) of any size; and (iii) a period of 24 months or more has elapsed since the Effective Date. Class B Performance Shares will convert when either (a) the Notice to Proceed Date occurs; or (b) when (i) the 30-day VWAP of GEV Shares exceeds A\$0.45 at any time subsequent to the Effective Date; and (ii) either GEV obtains ABS Full Approval for construction of an Optimum CNG Ship with net design gas storage capacity exceeding 250 MMscf or a contract for the construction of a CNG Ship for the Project is executed (Contract Date); and (iii) a period of 30 months or more has elapsed since the Effective Date. Class C Performance Shares will convert when either (a) the Notice to Proceed Date occurs; or (b) the 30-day VWAP of GEV Shares exceeds A\$0.55 at any time subsequent to the Effective Date; and (ii) the Contract Date occurs; and (iii) a period of 36 months or more has elapsed since the Effective Date. Class D Performance Shares will convert when the Notice to Proceed Date occurs. Class E Performance Shares will convert when a notice to proceed for a contract for the construction of CNG Ship(s) for the first project for the marine transportation of compressed natural gas in which GEV has an interest and which is reliant on SeaNG Coselle Technology is given. If the relevant milestones above are not achieved by the Expiry Date, then each Performance Share in the relevant class will be automatically redeemed by the Company for the sum of A\$0.00001 within 14 days of the Expiry Date. The issue of the Performance Shares was approved at the general meeting of shareholders held on 30 November 2017. Subsequent to the issue of the Performance Shares, Sea NG Corporation changed its name to GEV Canada Corporation.

No Performance Shares were converted or cancelled during the quarter. None of the Performance Shares had their vesting conditions met during the quarter.

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<sup>+</sup> See chapter 19 for defined terms

## **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here: Jack Toby Date: 30 October 2018

(Director/Company secretary)

Print name: Jack Toby

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

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<sup>+</sup> See chapter 19 for defined terms