

QUARTERLY ACTIVITY REPORT

30 June 2022

HIGHLIGHTS

- **Preliminary results from the Hydrogen Study indicate green hydrogen production can be achieved at the BSS Project earlier than originally anticipated**
 - Ownership of a renewable energy asset and the existing infrastructure surrounding the Project enhanced the potential for hydrogen production
- **Alkaline Water Electrolysis (AWE) has been selected as preferred technology for green hydrogen production due to its technical maturity compared to current alternative solutions**
- **Multiple existing water sources suitable for hydrogen production have been identified negating the requirement for a desalination plant, which would add significant capital costs**
 - Water is an essential element for green hydrogen production with approximately 10 litres required for every kilogram of hydrogen (H₂) produced
- **A Memorandum of Understanding (MOU) was signed with global hydrogen experts, Nel Hydrogen Electrolyser AS (Nel) and ENGV to assist regarding the Company's hydrogen strategy**
- **The Hydrogen and Expansion Studies are on track to be released during August 2022**
- **The Company's cash position as at 30 June 2022 was \$4.8 million**
 - The Company holds a major position in Metallum Resources Inc (TSXV:MZN). This position has a current valuation of approximately A\$8.0m (share price C\$0.055 per share – 25 July 2022)

Frontier Energy Limited (ASX: FHE) (Frontier or the Company) is pleased to provide its quarterly activities report for the quarter ended 30 June 2022.

Frontier is developing the Bristol Spring's Solar Project (**BSS Project or the Project**) located 120km Southwest of Perth in Western Australia. The Project will be the major source of renewable energy to provide power as part of the Company's strategy to become a green hydrogen producer.

Preliminary Results indicate Green Hydrogen production at BSS

The BSS Project is a large, utility-scale solar energy project located in the southwest of Western Australia. Development is well advanced and is designed to produce 114MWdc of renewable electricity in Stage One with land acquisition opportunities to expand beyond this.

During the March 2022 quarter, the Company engaged Xodus Group (part of the Subsea 7 Group of companies), to complete a Study assessing the potential for green hydrogen production (Hydrogen Study) at the Project as well as assess the growth potential (Expansion Study).

Preliminary results indicate that due to the Project's location, the initial capital required and time to first green hydrogen production is both cheaper and quicker than originally anticipated. Key reasons for this include:

- **Connection to the SWIS** – access to this power grid, only 3.5km from the Stage One site, allows the Company to sell power in excess of requirements for green hydrogen into the SWIS.

Importantly, it also provides the opportunity for the Company to purchase renewable energy from other providers (eg. wind energy) during low or no-sun periods when the solar plant is not generating power. Using other sources of clean energy and power arbitrage or swaps, the SWIS may be able to provide a 'virtual' battery for the project.

- **Multiple fresh water sources** exist in the region avoiding the need for a desalination facility. The requirement for desalination materially increases capital and operating costs and involves significantly more complex approvals extending timelines to achieve first production.

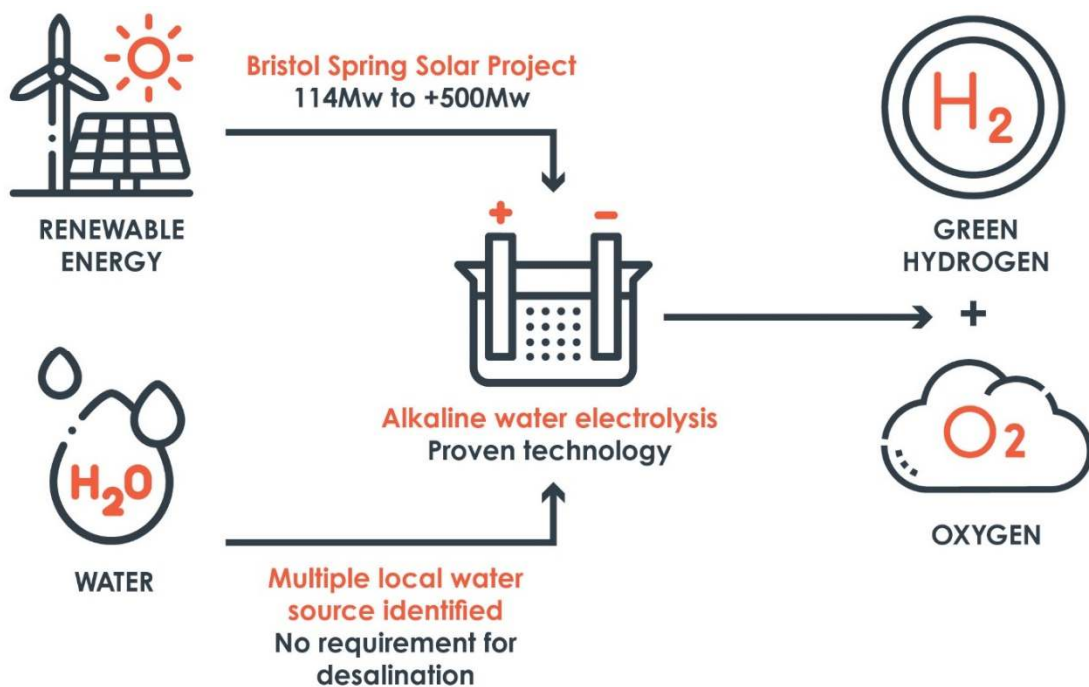


Image 1: Flow sheet for green hydrogen production

In addition, the Project is surrounded by major infrastructure and industries that are likely to be early movers regarding the transition from fossil fuels to green hydrogen. These include:

- **Hydrogen blending in natural gas networks** - The Dampier to Bunbury Natural Gas Pipeline (DBNGP) is Western Australia's most significant gas transmission asset and provides natural gas to Western Australia.

Importantly, a possible connection point to the DBNGP is located approximately 3km from the BSS Project where the pipeline branches off to provide gas to Alcoa's Wagerup Alumina Refinery.

The Western Australian government announced in May 2022 that to support the renewable hydrogen industry in Western Australia they have commenced investigating the implementation of a Renewable Hydrogen Target¹. This would involve setting targets for retailers to procure a certain percentage of energy fuelled by renewable hydrogen. This would create the first local market which would support emerging hydrogen projects and improve energy grid stability. The work is targeted for completion by late 2022.

- **Replace diesel in the long-haul transportation industry** - Given advancements in hydrogen fuel cell electric vehicles (FCEV), most notably in long-haul vehicles, it is likely that long-haul transportation will be an early adopter for the hydrogen industry.

The Western Australia government identified domestically produced green hydrogen as a key part of the strategy to reduce the reliance on diesel, which is all imported. Currently WA imports approximately 6.7 billion litres of diesel per year². The importance of energy security has been accelerated during 2022, most notably in Europe due to the Russia – Ukraine conflict.

The Company is nearing completion of the Hydrogen Study with results to be announced during August 2022.

Multiple existing water solutions identified throughout Southwest WA for future green hydrogen production

One of the key elements for green hydrogen production is access to purified water. As part of the Study, Xodus performed a water related technology assessment across water import, treatment and disposal.

Given the Study assumes power will be sourced from the BSS Project and it is connected to the Southwest Interconnected System (SWIS), the electricity grid covering the southwest of Western Australia, there is the potential for the green electrons to be transferred anywhere across the region. This provides greater flexibility regarding a location for a future hydrogen facility.

Given this and the forecast water consumption of approximately 0.002GL, for the initial facility being considered, the following existing solutions were considered as offering both suitable water as well as sufficient capacity.

- Yarragadee freshwater aquifer
- Bunbury Wastewater Treatment plant
- Existing desalination in Kwinana and Bunningup

¹ www.mediastatements.wa.gov.au/Pages/McGowan/2022/05/Renewable-hydrogen-target-to-be-investigated-for-Western-Australia.aspx

² *The West Australian* – 6 June 2022

Details regarding the current preferred strategy regarding water will be released as part of the Hydrogen Study.

Alkaline Water Electrolysis (AWE) selected as preferred technology for green hydrogen production

As part of the Green Hydrogen study, Xodus Group, performed a technology assessment to determine the most appropriate hydrogen plant design. Multiple features were assessed, including the timeframe to first hydrogen production, initial plant size and scalability, input power characteristics, electricity cost as well as rate of the hydrolyser's technological development.

From this assessment five technologies were initially considered:

1. Alkaline Water Electrolyser ("AWE"),
2. Proton Exchange Membrane ("PEM") Electrolyser,
3. Solid Oxide Electrolyser ("SOE"),
4. Anion Exchange Membrane ("AEM") Electrolyser, and
5. Capillary-Fed Electrolyser ("CFE").

Of these, only AWE and PEM were assessed further due to their industry maturity and their potential for commercial scale. Following this, AWE was selected as the preferred technology, based on its lower overall cost and robustness to produce green hydrogen at purity >99.98. As hydrolyser plants are modular, the selection of AWE at this time does not lock the company in to a particular technology in the event of future technology advances.

AWE Overview

AWE is a mature green hydrogen technology having been available at MW-scale for longer than other leading technologies, including PEM. As such, it offers the lowest cost per kW of installed capacity, long-term operational stability and plant life. Whilst also offering the lowest cost per kW, where the reduced price compared to PEM is largely explained by the maturity of the technology and the use of precious metals within the PEM the stack.

Further information regarding this will be included as part of the Hydrogen Study.

Corporate

Cash at the end of the Quarter

As at 30 June 2022, Frontier had cash on hand of \$4.8 million (unaudited, excludes Metallum cash balance).

During the quarter the Company sold its shareholding in Athena Resources Limited, realising proceeds of \$250,734.

Metallum Resources Inc.

As part of the divestment of the Superior Lake zinc asset, Frontier owns 128.9 million shares in TSXV listed, Metallum Resources Inc (MZN.TSXV). This holding has a current valuation of approximately A\$8m (share price C\$0.055 per share – 25 July 2022). As a result of the Group having control over MZN, the cash flows of MZN are included in the cash flow report.

Memorandum of Understanding (MOU) with leading hydrogen experts

As previously mentioned, the Company signed an MOU with Nel Hydrogen Electrolyser AS (NEL) and ENGV to assist in developing the green hydrogen production plant and market distribution.

NEL is widely regarded as a global leader in solutions to produce, store and distribute hydrogen and is listed on the Oslo Stock Exchange with a NOK20.3bn (A\$3bn) market capitalisation. ENGV is a leader in the deployment of hydrogen technologies in Australia with a reputation of delivering high quality, multifaceted projects on time and on budget.

Annual General Meeting

The Company's Annual General Meeting was held on the 31 May 2022 and all resolutions were passed via a poll. Resolutions were:

1. Adoption of Remuneration Report
2. Re-election of Director – Mr Grant Davey
3. Appointment of Auditor
4. Approval of Employee Share Option Plan
5. Grant of Options to Mr Mike Young
6. Grant of Options to Mr Chris Bath
7. Approval of 10% Placement Capacity.

Change to Board and Management Team

During the quarter Mr Chris Bath was appointed Company Secretary following the resignation of Mr Stuart McKenzie as Company Secretary.

Subsequent to the end of the quarter, Managing Director and CEO, Mr Mike Young, stepped down from his positions. Mr Young stepped down immediately from the board and will work through a transition period.

Non-Executive Chairman, Grant Davey will assume the position of Executive Chairman moving forward. The Company has commenced a process to appoint a new independent board member.

Payments to Related Parties

During the Quarter, payments to related parties for directors' fees totalled \$206,438.

Mr Grant Davey, who is a Director of the Company, is a director and shareholder of Matador Capital Pty Ltd. The Company makes payments to Matador Capital under Shared Services and Office Use Agreements in which Matador Capital provides office space, general office administration services and accounting services to the Company. The services provided by Matador Capital are recovered from the Company on a cost-plus basis and totalled \$98,768.

An amount of \$82,500 was also paid to Matador Capital representing the Company's pro rata share of office lease bank guarantee, which is repayable to the Company on termination of the relevant agreement.

Use of Funds

In relation to the Company's Quarterly Activity Report and Appendix 4C for the quarter ended 30 June 2022, the Company provides a comparison of expenditure against the Use of Funds as set out in the Company's Prospectus dated 12 January 2022 pursuant to Listing Rule 4.7C.2.

	Prospectus	YTD
	\$'000	\$'000
Land Option	1,650,000	1,575,000
Lease fees	220,000	55,043
Solar Feed	265,104	109,627
Generator model study	126,500	199,200
Interconnection works	55,000	-
Solar financing	154,000	-
Solar Offtake	572,000	-
Solar expansion study	123,750	-
Battery integration study	74,250	74,419
Wind integration study	126,500	-
Hydrogen integration study	234,850	71,510
Corporate Costs	2,873,220	784,975
Transaction cost	741,630	634,555
Working capital	783,196	-
	8,000,000	3,504,329

Authorised for release by Frontier's Board of Directors.

ENDS

To learn more about the Company, please visit www.frontierhe.com, or contact:

Grant Davey
Executive Chairman
+61 8 9200 3428
grantd@frontierhe.com

Adam Kiley
Corporate Development
+61 8 9200 3428
akiley@frontierhe.com

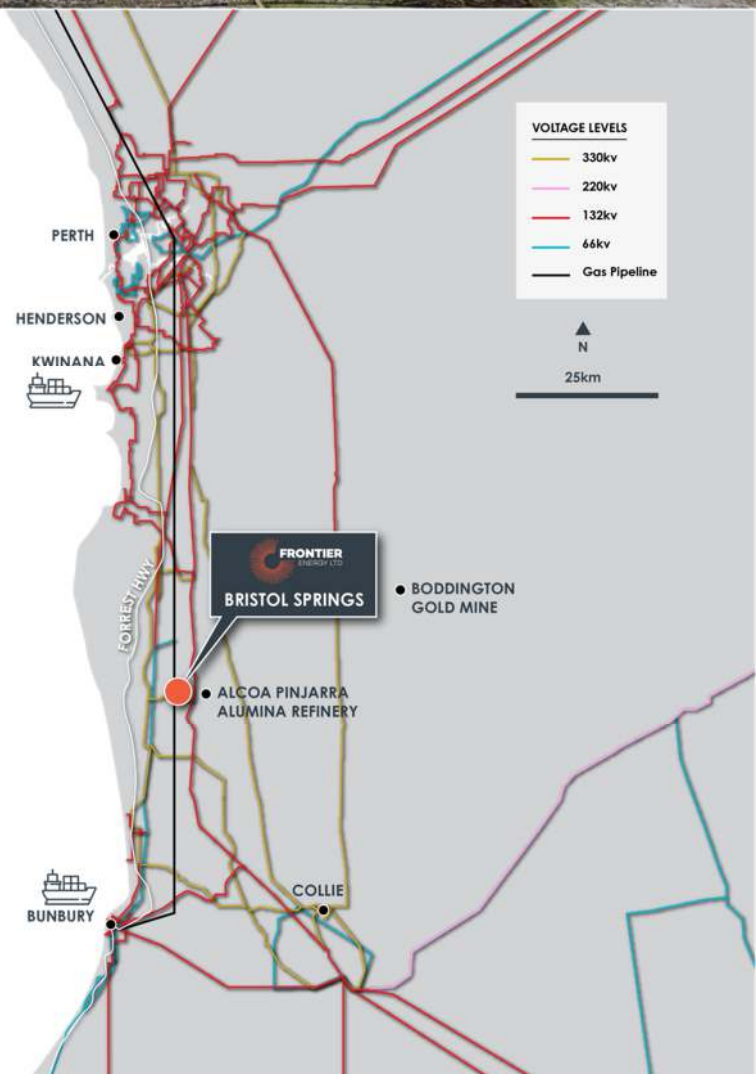


About Frontier Energy

Frontier Energy Ltd (ASX: FHE) is a clean energy company developing the Bristol Springs Solar Project (BSS Project) near Waroona in Western Australia.

The BSS Project will provide enough power for 45,000 homes and abate 180,000t of CO₂ emissions per year.

The Project is located 120 km south of Perth, and importantly is within the "Golden Triangle" of Kwinana-Bunbury-Collie, which provides both supporting infrastructure and potential offtake customers.



Directors and Management

Mr Grant Davey
Executive Chairman

Mr Chris Bath
Executive Director

Ms Dixie Marshall
Non-Executive Director

Registered Office

Level 20, 140 St Georges Terrace
Perth WA 6000

Share Registry

Automic Registry Services
Level 5, 126 Philip Street
Sydney NSW 2000

For a comprehensive view of information that has been lodged on the ASX online lodgement system and the Company website, please visit asx.com.au and frontierhe.com, respectively.

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Frontier Energy Limited

ABN

64 139 522 553

Quarter ended ("current quarter")

30 June 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	-	-
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	-	-
(d) leased assets	-	-
(e) staff costs	(286)	(476)
(f) administration and corporate costs	(707)	(1,491)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	10	11
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (Metallum - exploration expenditure)	(263)	(343)
1.8 Other (Study)	(74)	(104)
1.9 Net cash from / (used in) operating activities	(1,319)	(2,404)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(131)	(1,910)
(d) investments	-	-
(e) intellectual property	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
	(f) other non-current assets		
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	251	251
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	(75)	(71)
2.6	Net cash from / (used in) investing activities	45	(1,730)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	5,173	13,731
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(298)	(613)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	(331)	(331)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	4,544	12,787

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	5,911	541
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,319)	(2,404)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	45	(1,730)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	4,544	12,787
4.5	Effect of movement in exchange rates on cash held	138	125
4.6	Cash and cash equivalents at end of period	9,319	9,319

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	9,319	5,911
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)	9,319	5,911

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	305
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	1,319
8.2	Cash and cash equivalents at quarter end (item 4.6)	9,319
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	9,319
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	7.06
	<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer:	
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer:	
8.6.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer:	
	<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

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.

Date: 29 July 2022

Authorised by: **By the Board**

(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow 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 cash flow 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.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.