

QUARTERLY ACTIVITY REPORT

Quarter ending 30 September 2022

Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (Frontier or the Company) is pleased to provide its quarterly activity report for the quarter ending 30 September 2022. During the quarter the Company's activities focused on advancement of the Bristol Springs Green Hydrogen Project ("Project") located 120km from Perth in the Southwest of WA.

HIGHLIGHTS

- **Pre-Feasibility Study (PFS or Study) assessing green hydrogen production at the Project, completed by Xodus Group, determined the potential for Bristol Springs to be a early mover, low-cost hydrogen project. Highlights of this Study included:**
 - Stage One assumes 114MW solar farm (initial capital - \$166.3m), powering a 36.6MW alkaline electrolyser (initial capital - \$69.9m), for annualised hydrogen production of 4.4 million kg
 - Total costs¹ (inclusive of capital) are forecast at \$2.83 per kg of hydrogen produced, ranking the Project in the lowest cost quartile of green hydrogen development projects in Australia
 - The driver for the low cost and quick development timeline is the world class infrastructure surrounding the Project
- **An Expansion Study that assessed the total land under the Company's control (846ha), outlined future renewable energy of at least 438MW (inclusive of Stage One - 114MW)**
 - The Company's mid-term target is to have the capacity for +1GW of renewable energy as additional opportunities continue to be assessed
- **In consultation with Water Corporation, the preferred option to access water is through the existing Stirling Trunk Main pipeline (scheme water)**
 - The proposed capacity is 1,250 KI/day. This is sufficient for a 150MW electrolyser, some four times the size proposed in Stage One (36.6MW)
- **Global engineering and construction firm, GHD, was appointed to commence a Pre-FEED Study for the hydrogen facility. The Pre-FEED will be completed during 4Q2022**
 - The Pre-FEED Study (Class 3 CAPEX and OPEX) will provide a higher level of confidence compared to a Definitive Feasibility Study
- **Highly experienced energy and hydrogen expert, Mr Sam Lee Mohan was appointed as Managing Director. Ms Amanda Reid was also appointed as a Non-Executive Director**
- **As at 30 September 2022, Frontier had cash of \$3.3 million (unaudited excludes Metallum cash balance). Subsequent to the end of the quarter the Company raised \$10m, to accelerate development of Bristol Springs Green Hydrogen Project**

¹ Total costs = (total operating costs direct (annual) / annual production) + (total initial capital + total sustaining capital /life of operation production)

Pre-Feasibility Study outlines low-cost green hydrogen project

The Company engaged Xodus Group (Xodus) to undertake a Pre-Feasibility Study (PFS) to assess green hydrogen production initially based on a 114Mwdc solar farm (Stage One). The key inputs for the Hydrogen Study are highlighted below.

Stats	Unit	Key Input / outputs	Source
Life of operation	Years	25	Xodus
Solar			
Total Energy Production (Yr 1)	GWh pa	250	EPC Technologies
Degradation	%	0.3	EPC Technologies
Availability	%	98	EPC Technologies
Solar Capacity	MW	114	EPC Technologies
Reserve Capacity Allocation	MW	24.5	EPC Technologies
Hydrogen			
Electrolyser – nameplate capacity (pa)	MW	36.6	Xodus
Power required to produce 1kg Hydrogen	KWh	55	Xodus
Water consumption (pa)	L / hr	55,000	Xodus
Hydrogen Production (pa)	M kg	4.4	Xodus
Excess power sold (pa)	MW	11.2	Xodus
Average annual load factor targeted	%	91	Xodus
Actual load factor (applied)	%	75	Xodus
Costs – Operating			
Operating Costs – Energy (Solar)	A\$ m pa	\$3.2m	EPC Technologies
Fixed Operating costs – (Hydrogen)	A\$ m pa	\$3.5m	Xodus
Operating costs (Power sales/purchases) ¹	A\$ m pa	-4.5m	
Power Purchase Average Price - \$64/Mw	A\$ m pa	\$7.7m	
Excess Power Sales Average Price \$38/Mw	A\$ m pa	-\$4.5m	
Large Generating Certificates (LGCs) Average Price - \$35/Mw	A\$ m pa	-\$4.7m	
Capacity Credit Average Price -120,000/Mw	A\$ m pa	-\$3.0m	
Total Operating Costs (Direct)²	A\$ m pa	2.2m²	
Capital			
Initial – Energy (Solar)	A\$ m	\$166.3m	EPC Technologies
Initial – Hydrogen	A\$ m	\$69.9m	Xodus
Total Initial Capital	A\$ m	\$236.8m	
Sustaining Costs ³	A\$ m	\$11.7m ³	Xodus
Total Capital Costs		\$248.5m	

1 - Operating costs (Power sales/purchases) = Power purchased from the grid (during off peak) – Excess power sales (on the grid) – Capacity Credits – Large Generation Certificates). All assumptions regarding each sub cost are outlined in this Study

2 – Excludes Financing, depreciation and corporate costs

3 – Replacement Stack required after 90,000 hours. Replacement of solar panels are inclusive within Operating Costs - Solar

Table 1: Key Production and Costing Assumptions

The Study found the Project would produce approximately 4.4 million kilograms of hydrogen per annum. Based on the key inputs this would result in a total cost² of approximately \$2.83 per kilogram of hydrogen produced. The breakdown of the key inputs is illustrated in the image below.

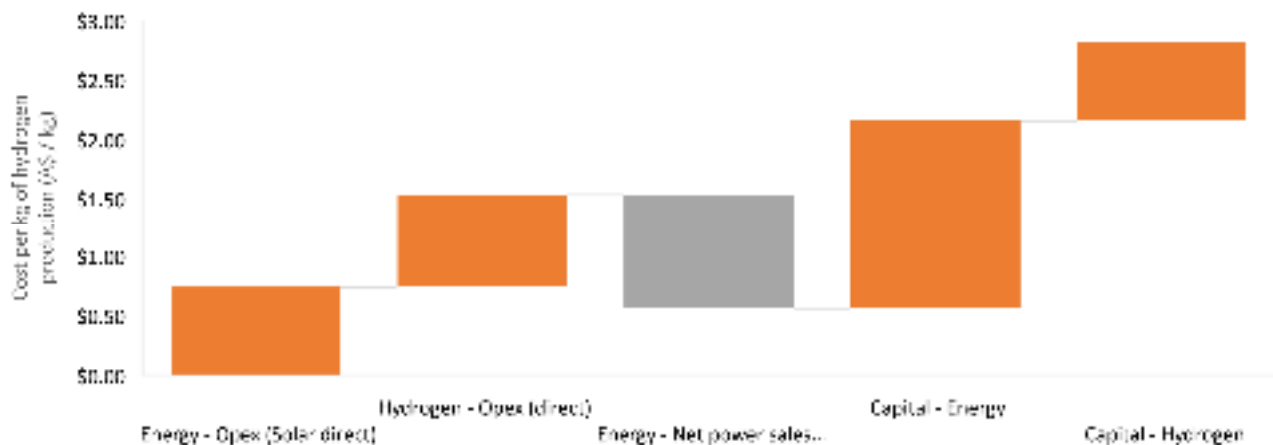


Image 1: Forecast costs per kilogram of hydrogen produced (A\$ / kg)

The key highlight of the Study is the low cost for hydrogen production. This low cost is due to the Project's location being surrounded by existing infrastructure, which lowers the capital cost, whilst also allowing for additional income to be generated (through excess energy sales and Reserve Capacity Credits) through the connection to the SWIS at the Landwehr Terminal. Full details of the Study can be accessed at the Company's website or clicking on the link below. <https://frontierhe.com/bristol-springs-project/>

Expansion Study outlined renewable energy of +438MW at BSS

In addition to the Pre-Feasibility Study (PFS) for Stage One, Xodus also completed a Renewable Expansion Technical Assessment ("Expansion Study"). The Expansion Study incorporated the total land under the Company's control (846ha) and assessed the various renewable energy solutions available. Frontier's land under control, as well as other critical infrastructure, including water access, Landwehr Terminal as well as the Dampier to Bunbury Natural Gas Pipeline (DBNGP) are shown in Image 2 below.

² Total Costs = (Total Operating Costs Direct (Annual) / Annual Production) + (Total Initial Capital + Total Sustaining Capital / Life of operation production)



Image 2: Project location with surrounding infrastructure

The Expansion Study concluded the optimal outcome was a solar-only solution that would generate (total energy yield of 945 GWh/yr) from an aggregated nominal power of 438MW installed, giving a performance ratio of 86%. Resulting energy yield is outlined in Table 2³ below.

Land Parcel	Solar		Panels
	Capacity (MWp)	Energy (GWh)	
Stage 1			
Land Parcel 1	114.4	247.9	179,580
Expansion			
Land Parcel 2 and 3	190.3	409.4	299,700
Land Parcel 4	133.7	287.7	210,600
Totals	438.4	945	689,880

Table 2: Solar Expansion Metrics

The Expansion Study assessed both solar and wind-power options, however concluded that whilst wind could be viable, a number of factors made it a less competitive, including:

- the relatively low wind resource (capacity factor 33%)
- relatively high cost of infrastructure
- potential approval complexities due to nearby wetlands; and
- the ability for the Project to be able to draw power from the SWIS via Landwehr Terminal.

³ Expansion study, EPCT Report, J000169A0002 Rev 22/07/2022, page 7

Access to water through existing water pipeline

Water is one of two key elements required to produce green hydrogen, with the other being renewable energy (solar energy). Given the Project's location, the Company had four options to source water, with three from existing networks/solutions. These comprised:

- Accessing scheme water via the Stirling Trunk Main pipeline;
- Yarragadee freshwater aquifer – one of the largest aquifers in Australia;
- Bunbury Wastewater Treatment plant; and
- Developing a stand-alone desalination facility.

In consultation with Water Corporation, the preferred pathway is through the existing Stirling Trunk Main pipeline (scheme water). Accessing the existing pipeline was the standout given its minimal cost (capital and operating), simplicity, timing as well as environmental and regulatory considerations.



Image 3: Water network in SW Western Australia

The connection will be off the Stirling Trunk Main, which is less than 1km from the Company's project area (Image 2). The pipeline connection proposed by the Water Corporation will however have capacity for 1,250kL per day, which is sufficient for an electrolyser of 150MW. This is four times larger than the facility proposed in Stage One (36.6MW facility - indicative water usage is 750kL per day). This capacity however aligns to the Company's mid-term strategy.

The indicative cost for water usage is \$1.16/Kl plus a fixed charge of approximately \$37k per month for 750 Kl/day and a fixed charge of approximately \$61k for 1,250 kL/day. This cost is in line with the assumption of \$2.5/Kl (inclusive of fixed charges) assumed in the Pre-Feasibility Study⁴. The initial capital cost estimate was between \$3m - \$4m, which again is in line with the PFS. The Company anticipates finalising the agreement with Water Corporation later this year.

Pre-FEED Study underway for Hydrogen Facility

Following the Pre-Feasibility Study, the Company commencement of a Pre-FEED focused on the 36.6MW alkaline electrolyser (hydrogen facility). The Company engaged global engineering firm, GHD, to complete this work, due to their excellent reputation, specifically its vast experience in the Australian hydrogen industry.

The scope of work will be to assess the hydrogen production case for a 36 MW NEL electrolyser. GHD will perform engineering for input to a Class 3 CAPEX and OPEX estimate, including:

- a) Electrolyser integration and assessment of utility requirements
- b) Cooling plant selection and high-level sizing
- c) Water supply/storage system design
- d) Power system design
- e) Hydrogen compression, storage and delivery to users including pipeline to nearby blending point and tube trailer loading
- f) Balance of Plant assessment including buildings, control systems, vent, safety and utility systems

The Pre-FEED is an essential step prior to completing offtake and project financing discussions and remains on track to be completed during 4Q2022.

⁴ ASX Announcement – 4 August 2022

Corporate

Cash at the end of the Quarter

As at 30 September 2022, Frontier had cash on hand of \$3.3 million (unaudited, excludes Metallum cash balance).

As a result of the Group having control over MZN, the cash flows of MZN are consolidated in the Appendix 4C quarterly cash flow report. This therefore increases the cash position in the cash flow report to \$7.3 million.

Subsequent to the end of the quarter the Company completed a \$10 million capital raising (before costs) to accelerate development of Bristol Springs Green Hydrogen Project.

Metallum Resources Inc.

As part of the divestment of the Superior Lake zinc asset, Ophiolite Holdings Pty Ltd, which Frontier holds an 87.5% interest in, owns 128.9 million shares in TSXV listed, Metallum Resources Inc (MZN.TSXV). This holding has a current valuation of approximately A\$4m (share price C\$0.03 per share – 27 October 2022).

As a result of the Group having control over MZN, the cash flows of MZN are required to be included in the Appendix 4C quarterly cash flow report.

Change to Board and Management Structure

During the quarter the Company made a number of changes to the board and senior management team. These changes included the appointment of highly experience hydrogen expert, Mr Sam Lee Mohan as Managing Director.

Mr Lee Mohan is an accomplished energy executive with over 20 years' experience in the energy and utilities industry. Mr Lee Mohan's experience spans many facets of the industry, from design and construction through to strategic asset management, regulation, policy, commercial and innovation. Mr Lee Mohan earned his MSc in Mechanical Engineering from the University of Portsmouth and an MBA from the Australian Institute of Business.

The Company also appointed Ms Amanda Reid as Non-Executive Director. Ms Reid has a significant background in government relations providing advice to a wide cross section of companies and organisations for more than 15 years for two national government relations and corporate communications firms. This included five years as a Partner at GRA Partners. She was also a senior adviser in previous West Australian State Governments with responsibility for managing a strategic communications unit. Ms Reid has held non-executive board positions across both private companies and not-for profit organisations and is a member of the Australian Institute of Company Directors.

Grant Davey, was appointed as Executive Chair during the quarter following the departure of Mike Young as Managing Director.

OTC Listing

The Company announce its secondary listing onto the OTCQB® (OTC) market in the United States. The Company's ticker symbol on the OTC is FRHYF. <https://www.otcm Markets.com/stock/FRHYF/overview>

Trading of Frontier's shares on the OTC is aimed at enhancing the visibility and accessibility of the Company to North American investors, with the listing allowing potential North American investors to both trade and settle during US trading hours in US dollars.

The OTC is an established trading platform, operated by OTC Markets Group in New York, providing live market trading in companies which hold primary listings in other markets. Trading of Frontier shares on the OTC imposes no additional compliance or regulatory standards over and above the Company's existing compliance requirements as an Australian incorporated entity listed on the Australian Securities Exchange. OTC trading is non-dilutive to existing Frontier shareholders, as no new shares are being issued to enable trading on the OTC.

Payments to Related Parties

During the Quarter, payments to related parties for directors' fees totalled \$120,082.

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 \$158,373.

Use of Funds

In relation to the Company's Quarterly Activity Report and Appendix 4C for the quarter ended 30 September 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 Options	1,650,000	1,899,674
Lease fees	220,000	110,000
Solar Feed	265,104	248,408
Generator model study	126,500	213,070
Interconnection works	55,000	-
Solar financing	154,000	-
Solar Offtake	572,000	-
Solar expansion study	123,750	135,281
Battery integration study	74,250	74,250
Wind integration study	126,500	126,500
Hydrogen integration study	234,850	331,365
Corporate Costs	2,873,220	1,110,095
Transaction cost	741,630	761,581
Working capital	783,196	-
	8,000,000	5,010,224

Authorised for release by Frontier Energy's Board of Directors.

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

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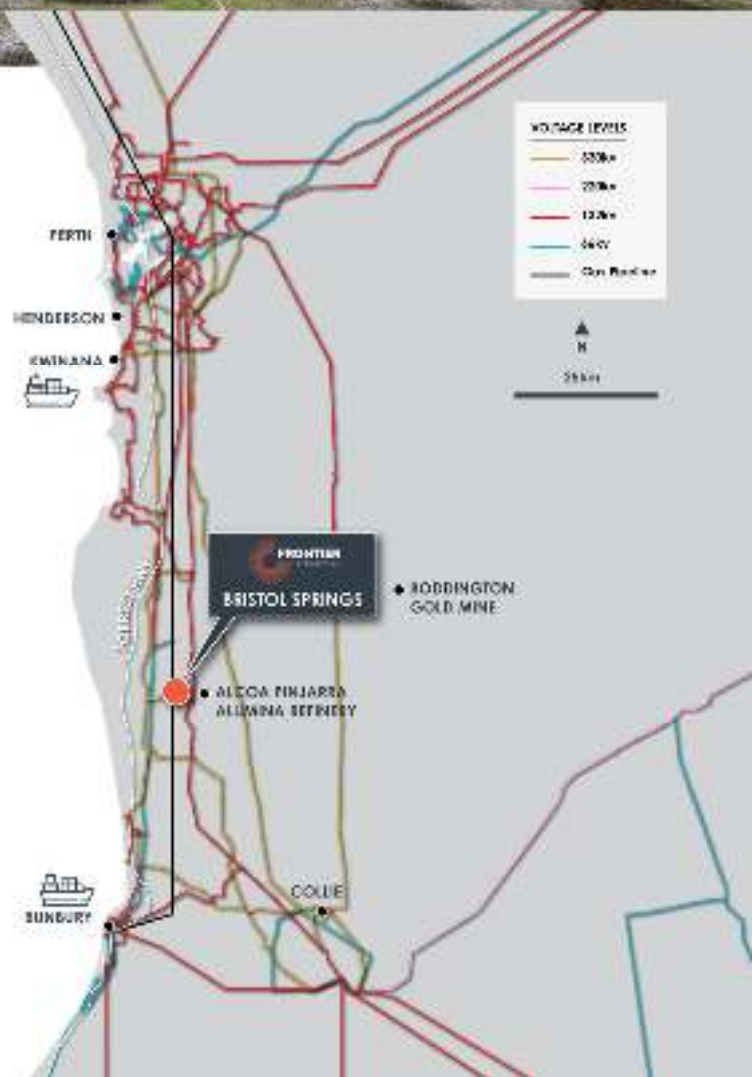
About Frontier Energy

Frontier Energy Ltd (ASX: FHE; OTCQB: FRHYF) is developing the Bristol Springs Green Hydrogen Project (the Project) located 120km from Perth in Western Australia.

The Company recently completed a Pre-Feasibility Study¹ that outlined the Project's potential to be both an earlier mover and one of the lowest cost green hydrogen assets in Australia.

The Project benefits from its unique location surrounded by major infrastructure. This reduces operating and capital costs compared to more remote hydrogen projects, whilst also being surrounded by likely early adopters into the hydrogen industry in the transition from fossil fuels.

¹ASX Announcement 4th August 2022



Directors and Management

Mr Sam Lee Mohan
Managing Director

Mr Grant Davey
Executive Chairman

Mr Chris Bath
Executive Director

Ms Dixie Marshall
Non-Executive Director

Ms Amanda Reid
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 September 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 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	(327)	(803)
(f) administration and corporate costs	(556)	(2,047)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	9	19
1.5 Interest and other costs of finance paid	(9)	(9)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (Metallum - exploration expenditure)	(157)	(500)
1.8 Other (Study)	(72)	(176)
1.9 Net cash from / (used in) operating activities	(1,111)	(3,515)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(797)	(2,707)
(d) investments	-	-
(e) intellectual property	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 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
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	(4)	(75)
2.6	Net cash from / (used in) investing activities	(801)	(2,531)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	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	-	(613)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	(331)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Lease payments	(91)	(91)
3.10	Net cash from / (used in) financing activities	(91)	12,696

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	9,319	542
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,111)	(3,515)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(801)	(2,531)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(91)	12,696
4.5	Effect of movement in exchange rates on cash held	1	125
4.6	Cash and cash equivalents at end of period¹	7,317	7,317

¹The Company controls Metallum Resources Inc (MZN) and accordingly includes MZN's cash flows in its consolidated statement of cash flows.

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	7,317	9,319
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)	7,317	9,319

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	278
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

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.

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)	(1,111)
8.2	Cash and cash equivalents at quarter end (item 4.6)	7,317
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	7,317
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	6.6
	<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: 31 October 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.