

## APPENDIX 4C – 31 MARCH 2019 COMPANY UPDATE & QUARTERLY CASHFLOW REPORT

#### Highlights:

- FEED study for a Commercial Demonstration Plant finalized.
- Discussions with potential offtake partners, feedstock (biogas) suppliers and funding partners for the proposed Commercial Demonstration Plant continued to progress. A high level of interest in the Hazer Process experienced.
- Concept Study for a Commercial Scale Hazer Plant (2.5 ktpa) completed.
- Assessment of carbon emissions abatement potential of the Hazer Process against international carbon reporting standards confirmed significant carbon abatement potential from the Hazer Process.
- Construction of the Paddle Tube Reactor (PTR) Pilot Plant by our strategic partner Mineral Resources Limited (ASX: MIN) was completed with commissioning in progress.
- Received certification of two Australian Innovation Patents during the quarter.
- Received a A\$1.6 million R&D Tax Incentive cash rebate for the year ended 30
  June 2018
- Cash reserves of A\$7.0 million as at 31 March 2019.

**PERTH, AUSTRALIA; 16 APRIL 2019**: Hazer Group Ltd ("Hazer" or "the Company") (ASX: HZR) lodges the attached Appendix 4C Quarterly Cashflow Report for the 9-month period ended 31 March 2019.

#### **Activities update**

Hazer had a productive quarter as it continued to progress its core development pathways for the Hazer Process of; (i) securing a Commercial Demonstration Plant ("CDP") to fully demonstrate a working commercial hydrogen production facility based on the Hazer Process, and (ii) supporting Mineral Resources Limited (ASX: MIN) with the commissioning of a graphite focussed pilot plant developed under the Binding Collaboration Agreement between the Companies.

Key activities undertaken during the quarter are outlined below.

Commercial Demonstration Plant (CDP) FEED Study Finalised; discussions to secure key agreements progressing.

A Front-End Engineering and Design (FEED) study for the CDP was completed during the quarter, with final report to be received in April following end of quarter. During the quarter the FEED Study was further developed to incorporate process improvements identified from the pilot plant trials in Q4 calendar year 2018, and to expand the study scope to include biogas pre-treatment facilities and to provide for compression and storage of hydrogen product.

The CDP is designed for a capacity of ~100 tpa of hydrogen (~375 tpa of graphite) and estimated to have a capital cost of ~\$15 million (+/- 30% level).

During the quarter Hazer progressed discussions with potential downstream offtake partners, feedstock (biogas) suppliers and funding partners for the Commercial Demonstration Plant ("CDP"). The Company is seeing a high level of interest in hydrogen projects and in participating in the Hazer technology.

Securing the commercial agreements necessary to progress the CDP remains our primary focus in the upcoming quarter. Our target remains to secure all the necessary project agreements to make a final investment decision on the CDP in mid 2019, with a projected commencement date to operate the CDP of Q4 calendar year 2020.

#### Concept Study for a commercial scale Hazer Plant further optimised

During the quarter Hazer completed an initial Concept Study for a commercial scale Hazer Plant with external engineering firm GLP Group.

This study has identified a robust and practical design for a plant of 2,500 tpa hydrogen capacity (approximately 8,810 tpa graphite). The plant has a small efficient footprint requiring minimal space (approximately 600 m2 plus graphite storage facility) and will include on-site electricity generation for process heating.

A Commercial Scale Hazer Plant of this size would be able to supply a fleet of approximately 200 buses, 150 – 400 freight trucks or approximately 6,000 light passenger vehicles. The size has been selected for capital efficient scale and to be able to be supplied from biogas generated from a variety of existing landfill gas facilities or municipal waste-water treatment plant biogas facilities.

Hazer estimates such a commercial scale plant would cost between \$40 - 50\$ million, depending on feedstock quality, location and product storage requirements (+40%/--20% level).

The Company is seeing significant interest in the technology in Australia and internationally. Hazer will look to progress early stage discussion with potential partners regarding opportunities for the early deployment of Commercial Scale Hazer Plants in Australia and internationally through 2019 as we progress the CDP.

#### Emissions abatement assessment undertaken

Hazer has recently engaged a leading global environmental consultant to undertake an assessment of the emissions abatement potential of the Hazer Process against international carbon reporting standards. This assessment has confirmed the very significant emissions abatement potential of the Hazer Process, with an estimated abatement credit of  $\sim 100-110$  t CO<sub>2</sub> (equivalent) per ton of hydrogen when the plant is operated on biogas as a feedstock.

This is an extremely positive outcome. This significant abatement potential confirms Hazer position as an ultra-low emission ("carbon-negative") hydrogen production technology and reinforces one of the Hazer Processes key selling benefits in pursuing the emerging high value markets for clean hydrogen as a transport fuel.

#### Mineral Resources Collaboration & Hazer Pilot Plant update

As advised in March 2019, Mineral Resources Limited (ASX: MIN) completed construction of their Paddle Tube Reactor (PTR) Pilot Plant in March, with commissioning activities being ongoing at the end of the Quarter.

The Hazer team has worked closely with the Mineral Resources staff to support achieving this milestone and continues to support Mineral Resources staff to finalise commissioning and develop the testing program for the PTR Pilot Plant to be undertaken over the coming months.

The key focus area for our collaboration with Mineral Resources over the next quarters will be on delivery and analysis of successful pilot plant program necessary to allow Mineral Resources to elect to continue to

Stage 2 of our strategic partnership. Under Stage 2, Mineral Resources will design, construct and own an initial small-scale graphite plant (based on the Hazer Process) to supply graphite to initial commercial customers. Subject to securing sufficient customer support, progressing to Stage 3 of our Collaboration Agreement would see this plant expanded to a nominal target capacity of 10,000 tpa of graphite.

Re-location of the Hazer Fluidised Bed Reactor (FBR) Pilot Plant to the Mineral Resources site in Kwinana, Western Australian was completed during the quarter and is ready to re-commence its planned pilot testing program over the coming months. The results of which will be used to support the ongoing CDP and Commercial Scale Hazer Plant development studies.

#### IP Update - Two Australian Innovation Patents certified

During the quarter Hazer was pleased to receive certification of two Australian Innovation Patents covering elements of the Hazer Process (AU 2018101787 and AU 2018101788 – please see announcements of 26 February 2019 and 1 April 2019).

Remaining patent applications remain ongoing and continue to be pursued as per the normal procedures and timelines of the various relevant patent organisations.

#### **Cashflow commentary**

The Company increased its cash reserves by \$1.275m to \$7.035 million during the quarter with the receipt of \$0.888 million of option exercise proceeds (net of costs) and a \$1.639 million cash rebate from our R&D Tax Incentive claim for the year ended 30 June 2018, more than offsetting operating cash outflows.

The option exercise proceeds relate to the exercise of listed Hazer options (ASX code HZRO) with these funds held in a share registry trust account as at 31 December 2018 and paid to the Company in early January 2019.

The Australian Commonwealth Government's R&D Tax Incentive program provides a cash refund on eligible research and development activities performed by Australian companies.

Net operating cash outflows (excluding the R&D Tax Incentive cash rebate) were \$1.252 million for the quarter. This includes one-off costs associated with the preparation of the R&D Tax Incentive claim, and lump-sum payments for research program activities carried out under contract in 2018.

The Company remains well funded to execute its key 2019 strategic objectives and planned activities and progress to a final investment decision on the CDP.

#### [ENDS]

### **Forward Looking Statements**

This announcement may contain certain "forward looking statements" which may not have been based solely on historical facts, but rather are based on the Company's current expectations about future events and results.

Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially to futures results expressed, projected or implied by such forward looking statements.

The Company does not undertake any obligation to release publicly any revisions to any "forward looking statements" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under the applicable securities laws.

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#### **ABOUT HAZER GROUP LTD**

Hazer Group Limited ("Hazer" or "The Company") is an ASX-listed technology development company undertaking the commercialisation of the Hazer Process, a low-emission hydrogen and graphite production process. The Hazer Process enables the effective conversion of natural gas and similar methane feedstocks, into hydrogen and high quality graphite, using iron ore as a process catalyst.

For further information or investor enquiries, please contact:

#### **Geoff Ward**

Email: contact@hazergroup.com.au

Phone: +61 8 6230 2259

For media enquiries, please contact:

#### **Nathaniel Bradford**

Email: nbradford@we-buchan.com

Phone: +16 437 812 102

#### **Hazer Group Limited - Social Media Policy**

Hazer Group Limited is committed to communicating with the investment community through all available channels. Whilst ASX remains the prime channel for market sensitive news, investors and other interested parties are encouraged to follow Hazer on Twitter (@hazergroupltd), LinkedIn, Google+ and YouTube.

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+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

HAZER GROUP LIMITED	
ABN	Quarter ended ("current quarter")
40 144 044 600	31 MARCH 2019

Con	solidated 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	(321)	(644)
	(b) product manufacturing and operating costs		
	(c) advertising and marketing		
	(d) leased assets		
	(e) staff costs including research and development staff	(563)	(1,585)
	(f) administration and corporate costs	(358)	(1,036)
1.3	Dividends received (see note 3)		
1.4	Interest received	9	23
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid		
1.7	Government grants and tax incentives - R&D tax rebate	1,639	1,639
1.8	Other (provide details if material)		
	- Net GST received / (paid)	(19)	22
1.9	Net cash from / (used in) operating activities	387	(1,581)

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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 (9 months) \$A'000
2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment		
	(b) businesses (see item 10)		
	(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)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	0	0

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares		
3.2	Proceeds from issue of convertible notes		
3.3	Proceeds/(refund) from exercise of share options	898	2,451
3.4	Transaction costs related to issues of shares, convertible notes or options	(10)	(20)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
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	888	2,431

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

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 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	5,760	6,185
4.2	Net cash from / (used in) operating activities (item 1.9 above)	387	(1,581)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	0	0
4.4	Net cash from / (used in) financing activities (item 3.10 above)	888	2,431
4.5	Effect of movement in exchange rates on cash held	0	0
4.6	Cash and cash equivalents at end of quarter	7,035	7,035

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	6,930	5,690
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other – bank guarantee	105	70
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	7,035	5,760

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	38
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	0
6.3	Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Director fees and superannuation paid to Non-Executive Directors (\$38k)

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

7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	0
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	0
7.3	7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

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	0	0
8.2	Credit standby arrangements	0	0
8.3	Other (please specify)	0	0
8.4	Include below a description of each facility above, including the lender, interest rate and		

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	(485)
9.2	Product manufacturing and operating costs	0
9.3	Advertising and marketing	0
9.4	Leased assets	0
9.5	Staff costs	(600)
9.6	Administration and corporate costs	(265)
9.7	Other (provide details if material)	0
9.8	Total estimated cash outflows	(1,350)

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10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
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		

### **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:	Gune	Date:16 April 2019
	(Company secretary)	, , ,
Print name:	Emma Waldon	

### Notes

- 1. 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.
- 2. 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