



30 July 2021

ASX: 14D

## Appendix 4C & June 2021 Quarterly Activity Report

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### Highlights:

- SiBox™ technology on track for Demonstration Module
- Matthew Squire appointed as Chief Executive Officer
- Tony Sacre appointed as a Director and the Chair of the Board
- Cash position improved to \$5.7m on receipt of the \$1.9m R&D Tax Rebate

Clean, scalable energy storage developer 1414 Degrees Limited (1414 Degrees or the Company) (ASX: 14D) provides the following activity report and Appendix 4C for the period ending 30 June 2021.

1414 Degrees' core focus continues to be the technical and commercial development of our silicon based thermal energy storage technology. To meet the challenges of successfully commercialising a new technology in a dynamic market the Company's strategies, structure and people are always evolving. This has recently resulted in:

- The development of SiBox™, the latest generation of our thermal energy storage technology, to efficiently and robustly harness the exceptionally high latent heat capacity of molten silicon to store energy from intermittent renewable energy. The research and development behind SiBox™ is led by our core technical team and supported by strong relationships with our strategic partners.
- New leadership at Management and Board level, with the appointment of Matthew Squire as Chief Executive Officer and Tony Sacre as Chair of the Board. These appointments significantly enhance the commercial, strategic and governance capabilities of the Company.
- Relocation into new premises, uniting all staff, particularly the technical and commercial teams, for the first time.
- Renewed technical, commercial, and business development focus on heat and combined heat and power applications, as informed by prospective customers and where SiBox™ is able to demonstrate its unique, competitive advantages.
- An updated development plan for the Aurora Energy Project that will ensure we gain the maximum return on investment from this site, financially and strategically, to support the development and demonstration of the SiBox™ technology.

The Company acknowledges the significant contribution of Dr Kevin Moriarty, who ably led 1414 Degrees through its formative years. We look forward to the next exciting growth phase in which we are well positioned to capitalise on the global transition to a clean energy future.

## Technology update

The Company's Research & Development team has focussed its development efforts on three thermal storage media options for SiBox™ which are radically different in design and superior to our previous generation of storage media. During the last quarter samples of each option completed six months of testing under anticipated real-life conditions. Two storage media options show negligible degradation, i.e. the chemical composition and energy storage density show minimal change and the structural integrity is maintained. This is a significant milestone in our long-term testing program.

As described in the SiBox™ Commercialisation Pathway ([ASX release 28/05/2021](#)), we are on-track to build our 1 MWh SiBox™ Demonstration Module by September 2022. Full-system design, optimisation activities and selection of the most robust, energy dense and lowest cost storage media option have been progressed in this quarter. The final storage media selection for the SiBox™ Demonstration Module is anticipated to be completed by September 2021. The Demonstration Module will be a full-scale single module of our new SiBox™ design, which will accelerate the commercialisation of SiBox™ as a competitive and scalable clean energy product, advance the Technical Readiness Level and provide confidence to large scale industrial and utility customers.

The Company continues to actively manage, document and protect all its intellectual property covering SiBox™ storage media materials and design, heat store design and arrangement, heating systems, energy recovery systems and applications. As part of this, the Company resolved a dispute with Climate Change Technologies (CCT), concerning a very early patent, on satisfactory commercial terms, as per ASX release dated 11 June 2021.

## Technology Collaborations

Our R&D project with the University of Adelaide, funded through the Innovation Connect program, has completed its first stage of theoretical analysis. The study is aimed at developing new low-cost silicon-based alloys to further improve the competitiveness of the SiBox™ storage media for different high-temperature applications. The next stage will experimentally evaluate the shortlisted alloys.

The Heavy Industries Low-carbon Transition Cooperative Research Centre ([HILT CRC](#)), of which 1414 Degrees is an Affiliate Partner, has been awarded \$39 million in cash support over 10 years from the Australian Government. HILT CRC aims to transform the Australian heavy industry sector to compete in the low-carbon global economy for carbon-neutral materials such as 'green' steel, alumina, cement and other processed minerals. HILT-CRC is an opportunity for 1414 Degrees to contribute to research and engage with prospective customers in heavy industries seeking to cost-effectively decarbonise and hence aligns well with our vision.

## GAS-TESS

The GAS-TESS operated in the last quarter for a three week period to maintain plant operability and increase runtime. Going forward the Company plans to operate the GAS-TESS on a similar periodic basis for specific tests and to maintain plant integrity.

The GAS-TESS technology and commercialisation pathway has been mapped out, particularly focussing on hybrid approaches with other generating assets. We continue to look for and work with partners interested in how the GAS-TESS can add value to their operations, including many water utilities and other applications where there is waste gas or variable/ intermittent gas with calorific value that can be better used.

## Aurora Project

Detailed financial modelling of the business case for the first stage of the Aurora Energy Project (AEP), a 140MW/140MWhr battery, has confirmed its high revenue potential and profitability which has led to strong interest in financing the project. Further financial modelling is underway taking into account the effect of different future market scenarios to ensure a robust, bankable business case and secure investment. To complement this, the off-take strategy is being reviewed to firm up revenue projections, in particular merchant/spot-market sales versus contracted power purchase/capacity agreements.

The preferred National Electricity Market (NEM) connection point for the Project is the 275kV transmission line immediately adjacent to the Aurora project site. The process for connecting to this line was assisted by the Australian Energy Market Commission (AEMC) implementing a rule change on July 8<sup>th</sup> relating to [Dedicated Connection Assets](#). By providing clarity on the requirements for connection, the Company can now progress commercial discussions with the relevant parties, OZ Minerals and ElectraNet, and the technical studies required for the transmission connection agreement.

Strong responses were received from top-tier vendors to an updated Expression of Interest for supply of batteries and construction of the first stage of the AEP. Negotiations are continuing with preferred parties.

Relevant approvals for the project have been obtained, including Crown Sponsorship and Office of the Technical Regulator Certificate. The Development Approval variation has been lodged and is under assessment by the South Australian Department of Planning, Transport and Infrastructure.

## Corporate

The quarter saw changes to the Company's executive team and overall Board governance structures. The former Company Secretary and Director, Richard Willson resigned, whilst the former Managing Director, Jamie Summons, finished with the Company. More recently, the Company bade farewell to its longstanding Executive Chairman, Dr Kevin Moriarty, who has resigned as both an executive and director.

1414 Degrees has appointed Matthew Squire as Chief Executive Officer and he will start his role on August 2<sup>nd</sup>. Matthew joins the Company with over 20 years' experience in the oil and energy sectors, many in senior leadership roles, and has been directly involved in some of the largest energy transactions in Australia. The Board believes the executive team of Matthew Squire and Dr Jordan Parham, Chief Operating Officer, will provide strong leadership, outstanding technical capability and drive further commercial initiatives and developments.

During the quarter Tony Sacre was appointed as a Director and the Chair of the Board and Tania Sargent was appointed as Company Secretary.

All people and equipment have now been moved to our new Daws Rd premises. In particular, all research and development facilities have been safely moved and all testing has resumed.

## Financial

The June quarter closing cash position improved to \$5.7m on receipt of the \$1.9m R&D Tax Rebate lodged with the ATO in April this year. The Company's continued focus on cashflow management will ensure the timely delivery of key projects.

As required by ASX Listing Rule 4.7C3, the Company notes that \$106,000 was paid to related parties during the quarter. These payments were salaries, fees and superannuation paid to Directors.

This announcement was authorised by the Board of 1414 Degrees Limited.

### FOR FURTHER INFORMATION PLEASE CONTACT:

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or

Tony Sacre, Chair

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### ABOUT 1414 DEGREES LIMITED

1414 Degrees is developing and commercialising its silicon-based thermal energy storage technology, SiBox™ to enable a clean energy future. The Company's vision is to harness the extremely high latent heat capacity of silicon and firm intermittent renewables to provide high temperature heat 24/7 for large industrial applications and energy storage to deliver reliable electricity.

The Company plans to commission a demonstration module of the SiBox™ technology in 2022 which will accelerate the commercialisation of SiBox™ as a competitive, scalable clean energy product. The Company has previously implemented pilots which have led to the refinement and evolution of its technology.

In 2019 the Company made the strategic purchase of the Aurora Energy Project (AEP) located near Port Augusta, South Australia. The immediate focus of the project is to develop a hybrid power plant to generate revenues for 1414 Degrees to further develop its core SiBox™ technology. Once ready for commercialisation, the AEP site will allow 14D to pilot and demonstrate a grid-scale version of the SiBox™ technology.

For further information please visit [www.1414degrees.com.au](http://www.1414degrees.com.au)

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## 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.

## Appendix 4C

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

**Name of entity**

1414 Degrees Ltd

**ABN**

57 138 803 620

**Quarter ended ("current quarter")**

30 June 2021

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	46	51
1.2 Payments for		
(a) research and development	(27)	(147)
(b) product manufacturing and operating costs	(20)	(111)
(c) advertising and marketing	(6)	(53)
(d) leased assets	(1)	(4)
(e) staff costs	(558)	(2,222)
(f) administration and corporate costs	(313)	(1,788)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	4	18
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	1,978	2,463
1.8 Other (provide details if material)	18	(7)
<b>1.9 Net cash from / (used in) operating activities</b>	<b>1,121</b>	<b>(1,800)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(3)	(8)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
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	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(3)</b>	<b>(8)</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	-	3,176
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	-	(59)
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)	-	-
<b>3.10 Net cash from / (used in) financing activities</b>	<b>-</b>	<b>3,117</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of period	4,585	4,394
4.2 Net cash from / (used in) operating activities (item 1.9 above)	1,121	(1,800)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(3)	(8)

Appendix 4C  
Quarterly cash flow report for entities subject to Listing Rule 4.7B

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	3,117
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>5,703</b>	<b>5,703</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	5,703	4,585
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>5,703</b>	<b>4,585</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	(106)
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>		



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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
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.		
N/A		

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	1,121
8.2 Cash and cash equivalents at quarter end (item 4.6)	5,703
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	5,703
8.5 <b>Estimated quarters of funding available (item 8.4 divided by item 8.1)</b>	5.09
<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: n/a	
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: n/a	
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: n/a	
<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: 30 July 2021

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.