

28 October 2021 ASX: 14D

# Appendix 4C & Quarterly Activity Report

#### Highlights:

- SiBox Demonstration Module project on schedule with storage media design selected
- Agreement executed with Woodside Energy Technologies to fund \$2 million towards the SiBox Demonstration Module (subsequent to the quarter's end)
- Aurora Energy Project strategy reviewed and development variation approvals progressed
- Appointment of new Chief Executive Officer, Matthew Squire who commenced on August 2<sup>nd</sup>
- Cash balance at end of quarter \$4.2 million

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

## Strategic summary

This has been a constructive quarter for the Company with the establishment of new leadership at Management and Board level as well as a renewed strategic focus on delivering shareholder value. The quarter saw an increasing demand for renewable energy solutions with record levels of capital projects and investments announced globally, coupled with a strong rise in global energy prices. It is expected that larger demands for investment in renewable energy will be recognised at the forthcoming COP 26 UN Climate Change Conference in Glasgow at the end of October. This bodes well for the Company's strategy as we look to progress our technology, commercialise our assets and position for future projects that will require thermal energy storage solutions.

The technological and commercial development of the SiBox<sup>™</sup>, our latest Silicon based thermal energy storage technology, has been confirmed as the primary focus for the Company. After further testing of storage media we are moving ahead with the construction of the SiBox Demonstration Module. The purpose of this project is to validate the technology as a robust system for the storage of renewable energy and its re-delivery in the form of high temperature heat. This will ensure that abundant, affordable, yet intermittent renewable energy can be transformed into clean, reliable heat for a larger array of energy users such as minerals processing industries, thermal power stations and those needing a combined heat and power solution. Our vision is to position the Company's SiBox technology as a core component of a broad range of future renewable energy projects, providing a runway of investment opportunities for shareholders.

The Aurora Energy Project north of Port Augusta is an important opportunity for the Company and we have continued to invest in its progression and development. The approvals that underpin the project have been maintained and are being amended to suit the change in scope. We are now looking to accelerate the AEP including bringing in a partner to participate in the final development activities (such as equipment selection and transmission studies) as well as share the future capital costs. At this stage we anticipate a final investment decision for the project to be in late 2022.



#### Technology update

The core component of the SiBox thermal energy storage technology is the storage media. It consists of a silicon-based Phase Change Material (PCM) and a means of containing the PCM. The key breakthrough of SiBox is the combination of a unique PCM and a containment design which harnesses the latent heat properties of silicon for thermal energy storage, while solving key challenges such as preventing oxidation, managing volume change during melting and solidification, and managing inter-reaction with containment materials. 14D have tested and evaluated in detail multiple storage media options and have now selected the preferred option for the SiBox Demonstration Module. This selection feeds into the final detailed design work prior to procurement of materials later this year.

The purpose of the SiBox Demonstration Module is to advance the Technology Readiness Level (TRL) of the SiBox technology and demonstrate the performance of the engineering system. This will de-risk the technology allowing it to be scaled up for larger capital investment in the future. During the quarter the Company was involved in negotiations with Woodside Energy Technologies for a potential funding agreement that included details of the project concept, schedule and scope. An agreement was entered into subsequent to the quarter's end. This is a strong endorsement of the approach being undertaken by 1414 Degrees to advance the SiBox technology.

Investment in the SiBox concept is now set to commence with construction and commissioning expected to be completed by early 2023 and a further performance testing program thereafter.

# Aurora Energy Project (AEP) – Port Augusta

A detailed review of the Aurora project's concept and economics was undertaken during the quarter whereby it was re-confirmed that an initial 140 MW / 140 MWh Battery Energy Storage System (BESS) installation and associated works for connection to the immediately adjacent ElectraNet / OzMinerals 275kV transmission line is the optimum approach for Stage 1 of the project. The project footprint will



Matt Squire 1414 Degrees CEO at the AEP site near Port Augusta

be considerably smaller than the original solar thermal project however the plan to provide dispatchable renewable energy in future remains. An initial BESS will unlock the potential for future solar installation as well as providing further system security and support to the electricity network surrounding Port Augusta.

A Development Approval variation was submitted to the SA Department for Infrastructure and Transport in June. This variation includes provision for battery energy storage, solar photo-voltaic generation as well as thermal energy storage and the original solar thermal project. Approval will allow for the optimum use of the AEP site, which remains an excellent location for the development of large-scale renewable energy. At this stage it is expected that the Development Approval variation will be received in the December quarter facilitating the next phase of activity including ongoing engagement with all stakeholders to ensure the AEP regains development momentum.





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#### Corporate

Matthew Squire joined the Company as Chief Executive Officer on 2<sup>nd</sup> August 2021. Since joining he has met with several stakeholders and undertaken reviews of company resourcing and governance procedures to ensure the Company is focussed on achieving commercial outcomes and progressing the development of its technology.

The Company was also very pleased to recruit two employees, Callum Phelps and Sam Ovens-York who will join the R&D and SiBox Demonstration Module teams fulltime from December following their completion of undergraduate studies at the University of Adelaide's School of Mechanical Engineering.

All staff worked remotely during the July seven day lockdown in South Australia due to Covid-19. There was no material interruption to the Company's operation or business from the pandemic during the quarter.

#### Financial

At quarter end the Company held \$4.179 million in cash and continues to focus on cashflow management to maintain liquidity and ensure the timely delivery of its projects. \$1.520 million of net cash outflow was used in the Company's quarterly activities which included approximately \$380,000 of one-off legal fees and relocation costs.

As required by ASX Listing Rule 4.7C3, the Company notes that \$147,000 was paid to related parties during the quarter. These payments were salaries, fees and superannuation paid to Directors.

#### Events subsequent to September 30 2021

On October 13<sup>th</sup> the Company executed agreements with Woodside Energy Technologies Pty Ltd (Woodside), a subsidiary of Woodside Energy Ltd, to support further development and potential partnership in the future commercialisation of 14D's SiBox technology. Woodside will contribute up to \$2m to the circa 1 MWh demonstration module. These contributions will be made on the completion of specific project milestones by 14D. The first milestone is due for completion in November with construction and commissioning anticipated to be completed in January 2023. This will be followed by a rigorous testing and performance monitoring schedule throughout the year.

Following completion of the prescribed program Woodside will make a decision whether to participate further in the direct investment of the technology. Should Woodside choose to do so, 1414 Degrees and Woodside will create a Special Purpose Vehicle (SPV) to hold the SiBox intellectual property (IP) for its future development. Negotiations around the structure of the SPV will not occur until after Woodside have made a decision to participate further. 1414 Degrees' interest in the SPV will not be less than 51% with Woodside's interest being dependent upon it's investment as a proportion to an agreed fair value of the technology. Further details of the arrangement with Woodside were provided in the Company's ASX announcement on October 13<sup>th</sup>.

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



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#### FOR FURTHER INFORMATION PLEASE CONTACT:

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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. SiBox will harness the extremely high latent heat capacity of silicon in its proprietary storage system. This will enable intermittent renewables to provide flexible, ultra-high temperature heat 24/7 for large industrial applications and to deliver reliable heat and power supply when required. It is envisaged that the flexibility of the SiBox™ modular development concept will also provide energy customers with the ability to optimise their energy systems in a way that maximises their utilisation of cheaper renewable power and simplifies their purchasing from wholesale energy suppliers.

The Company plans to commission a demonstration module of the SiBox™ technology in 2022 which will accelerate the commercialisation of SiBox™ as a competitive 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 focus of the project is to develop a long-term renewable energy project delivering reliable electricity to the region and NEM. Once ready for commercialisation, the AEP site will also allow 14D to pilot and demonstrate a large commercial scale version of the SiBox™ technology. For more information, please visit www.1414degrees.com.au

#### **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**

# Quarter ended ("current quarter")

57 138 803 620

30 September 2021

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	80	80
1.2	Payments for		
	(a) research and development	(69)	(69)
	(b) product manufacturing and operating costs	(1)	(1)
	(c) advertising and marketing	(24)	(24)
	(d) leased assets	(1)	(1)
	(e) staff costs	(676)	(676)
	(f) administration and corporate costs	(813)	(813)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	4	4
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	(20)	(20)
1.9	Net cash from / (used in) operating activities	(1,520)	(1,520)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	(6)	(6)
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-

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Con	solidated 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)	-	-
2.6	Net cash from / (used in) investing activities	(6)	(6)

3.	Cash flows from financing activities	
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-
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	-
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	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	5,705	5,705
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,520)	(1,520)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(6)	(6)

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	4,179	4,179

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	4,179	5,705
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)	4,179	5,705

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	(147)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
	if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must includ nation for. such payments.	e a description of, and an

7.	Financing facilities  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.	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 qu	arter 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.		itional financing
	N/A		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(1,520)
8.2	Cash and cash equivalents at quarter end (item 4.6)	4,179
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	4,179
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	2.75
	Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherw figure for the estimated quarters of funding available must be included in item 8.5.	

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

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.

8.6

## **Compliance statement**

- 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: 28 October 2021

Authorised by: By the Board

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

#### **Notes**

- 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.