

ASX RELEASE | CLEARVUE TECHNOLOGIES LIMITED
(ASX:CPV | OTC:CVUEF)

Appendix 4C & Quarterly Activities Report

31 JULY 2023: Smart building materials company ClearVue Technologies Limited (ASX:CPV OTC:CVUEF) (*ClearVue* or the *Company*) provides its quarterly cash flow and activities summary for the period ending 30 June 2023.

QUARTERLY ACTIVITIES REPORT

Quarter Highlights

- Board & Management Team Appointments and Changes
- CPV boosts offering following acquisition of Lusoco IP
- CPV launches improved IGU and new solar façade solutions
- ClearVue secures \$2m grant to locally manufacture core technology
- BCA Skylab testing

Operational Update

During the quarter ending 30 June 2023 the Company delivered on several of its previously announced plans, including:

- completing key changes to its board of directors and the appointment of a new global CEO in Martin Deil – a globally recognised leader from the façade industry; and
- most significantly, completing work on, and launching in London, an improved Generation 2 product design for its ClearVue PV[®] solar vision glass integrated glazing unit or IGU *and* a new integrated Solar Façade Solution to offer a comprehensive solution for the entire building envelope.

Additional key milestones and activities for the quarter included securing a \$2m grant from the Western Australian state government and the acquisition of the intellectual property and assets of Netherlands based Lusoco B.V. opening up new potential revenue lines and opportunities for the Company including in the areas of outdoor advertising and public infrastructure. Further information is set out in the summary below.

Board & Management Team Changes

As announced on 1 May 2023 and on 23 May 2023 ClearVue significantly strengthened its leadership and governance teams by appointing Martin Deil as Global CEO and two new board members with strong industry expertise – Charles Mowry and Gerd Hoenicke:

- Mr Deil brings a deep knowledge of the international façade and the architectural envelopes business to ClearVue having spent the past 22 years in various senior management roles of increasing

responsibility within the Permasteelisa Group (www.permasteelisagroup.com) in different locations globally. Mr Deil's most recent role has been as CEO Permasteelisa in the United Kingdom.

- Mr Charles Mowrey, based in California, has over five decades of experience in the commercial glass and glazing industries. Mr Mowrey is currently CEO of leading US contract glazier 8G Solutions.
- Mr Gerd Hoenicke, based in Germany, is a recognised industry leader in facades and curtain wall systems – a senior level executive with more than 35 years of progressively responsible experience in the international facade industry.

Further information on all three appointments can be found in the two announcements of 1 May 2023 and on 23 May 2023.

As previously reported on 18 July, Global CEO Martin Deil visited ClearVue staff and partners in Australia. This visit served as an invaluable opportunity for him to acquire a comprehensive understanding of the company and its operations, while articulating his vision and plans for the organisation to the team.

Mr Deil was also introduced to brokers and shareholders at an investor information evening held on 27 June 2023. The investor presentation used for this event was released to the ASX on the same day and can be found at the ASX website.

Mr Deil has since returned to ClearVue's head office in Perth for the month of August 2023 to deepen his understanding of the technology, product, business opportunity and operations.

The Company is also pleased to report that during the period after his first visit to Perth, and prior to returning, Mr Deil has (with board consent) purchased more than 1 million shares in the Company on the market bringing him into the Company's Top 20 shareholder list.

Other Board and Team Changes

As announced on 10 February 2023 Non-Executive Director Stuart Carmichael stepped down from the board on 30 June 2023. The ClearVue board and management would like to express their sincerest gratitude to Stuart for his outstanding leadership and vision which has been vital to ClearVue's success and growth to this point.

Stuart had been with ClearVue since 2018 and was instrumental in successfully listing the Company onto the ASX and, with an unwavering commitment to good governance, has guided the board and management since the listing. ClearVue will continue working closely with Stuart in a consulting capacity.

Clifton Smyth (appointed on 9 November 2022 - see announcement), has had a job title change from 'Global Business Development Director' to 'Chief Business Development Officer', and Earle Harper's job title has been changed to 'Chief Commercial Officer', both to better reflect their roles in the Company.

The ClearVue management team was also pleased to announce the appointment of Anna Abrossimova who has recently joined the Company on 6 June 2023 as our new Head of Marketing. Anna brings over 20 years of experience in marketing and advertising to the Company.

Further and as reported on 18 July through the Company's Newsletter, the ClearVue board wishes to advise that Basil Karamelas had resigned as CEO for North America. The ClearVue board, management and staff are grateful for Mr Karamelas' dedication and achievements for the Company and wish him all the best in his future endeavours.

CPV launched improved IGU and new solar façade solutions

On 18 May 2023, in what was a major milestone for the Company, ClearVue confirmed the official release of its improved Generation 2 product design for its ClearVue PV[®] solar vision glass integrated glazing unit or IGU. At the same time, the Company officially released new integrated Solar Façade Solutions at a private event at the Building Centre in London (<https://www.buildingcentre.co.uk/>).

The new IGU design is a step-change for how ClearVue's core product is manufactured - substantially simplifying the assembly and fabrication of ClearVue's world leading triple and newly engineered double glazed IGU with such design improvements reducing the fabrication time for our licensed manufacturers of a finished IGU by over 90% (compared against the earlier design) - with consequent cost savings and the benefits of being able to scale production faster and increase manufacturing throughput.

ClearVue's new Solar Façade Solutions extend energy generation across building façades by combining ClearVue's patented transparent solar glazing with ClearVue solar spandrel panels and solar wall cladding panels for enhanced efficiency and a lower average cost per watt. The expected payback period, depending on territory, for a full Solar Façade Solution is less than 8 years versus an expected product life of over 30 years.

By integrating ClearVue's patented transparent solar glazing IGUs with other solar energy generating façade solutions including spandrel panels and cladding, ClearVue can optimize efficiency, lower the overall cost of manufacturing and installation while maximizing energy production from a façade providing a faster payback period on new curtain wall and façade projects resulting in improved return on investment.

ClearVue's latest improvements to its solar clear vision glass IGU design are expected to:

- Reduce embedded carbon by approximately 30% by incorporating advanced thermoplastics
- Offer a double glazed IGU design which reduces thickness by up to 48.5% when compared to ClearVue's current triple glazed IGU design and deliver a consequent weight reduction of up to 20kg per square meter (40% weight reduction)
- Reduce thickness of the previous triple glazed IGU by 15.4%
- Provide an IGU assembly process that allows seamless integration with standard IGU assembly production lines
- Decrease IGU assembly labor time by 90% with consequent cost savings and increased production outputs
- Work with advanced thermal glass coatings that materially reduce building energy use
- Eliminate the risk of moisture condensation in a façade through the wire entry and exit points through the IGU

ClearVue's new Solar Façade Solutions are expected to deliver:

- Reduced overall cost per watt by over 70% when compared to previous generation vision glass by itself
- Increased output averaging 100 watts peak per square meter over an entire façade



Artist renderings of ClearVue's new Solar Façade Solutions.

For more information on the new ClearVue Solar Vision Glass design and the new solar façade solutions please see the full [announcement](#).

ClearVue boosts offering following acquisition of Lusoco Intellectual Property

On 17 May the Company [announced](#) that it had signed an asset Purchase Agreement with Netherlands-based Lusoco B.V. (**Lusoco**) to acquire its intellectual property and associated assets.

Like ClearVue, Lusoco is a deep tech company, which was established as a spin out from the Eindhoven University of Technology (Technische Universiteit Eindhoven) (**TU/e**) by co-founders Teun Wagenaar and Dr Jeroen ter Schiphorst who as part of the arrangement have since joined the ClearVue team.

The Lusoco technology has multiple applications including: building and glazing façades (for advertising, artwork and directional messaging); public infrastructure (such as bus shelters, road barriers, as well as public art and advertising); automotive (glass and plastics); autonomous self-powered street signs and other directional signage; self-powered safety, security and exit signs; and a range of other signage types.

More information on the technology and the opportunity for ClearVue following this asset purchase can be found in the full [announcement](#).



Artistic impression of Lusoco's fluorescent inks deployed into a bus shelter application.

ClearVue secures \$2m grant to locally manufacture core technology

On 24 May 2023 the Company confirmed that it signed a Financial Assistance Agreement with the then Western Australian Minister for State Development, Jobs and Trade, the Hon. Roger Cook MLA to receive a grant of up to AUD \$2 million made under the WA Government's Investment Attraction Fund to assist with the establishment of a WA-based Photovoltaic and Nanoparticle Components Manufacturing Facility.

Grant funds are to be used to establish a new advanced manufacturing facility in Perth to onshore manufacturing of key ClearVue components required for use in its solar integrated glazing units and windows.



Western Australian Premier the Hon. Roger Cook MLA with ClearVue's Victor Rosenberg (right) and Jamie Lyford (left).

More information on the grant and the proposed manufacturing facility is provided in the [announcement](#).

Macquarie University and ClearVue Secure ARC Linkage Project Grant

As reported in the Company's Newsletter [announced](#) and released on 18 July 2023 after Quarter end (**Newsletter**) ClearVue research partner Macquarie University was announced as the recipient of a \$566,000 Australian Research Council Linkage project grant for a 3-year research project entitled "Highly Efficient Solar Window Technology Enabled by Quantum Dots".

The research team lead by Professor Shujuan Huang, Dr Robert Patterson and Dr David Payne along with ClearVue's own Dr Mikhail Vasiliev will focus on exploring the use of inorganic quantum dots in the ClearVue solar photovoltaic glazing solution.

Please see the [Newsletter](#) and the Australian Government's ARC funding announcements webpage¹ for more information.

ClearVue Products Showcased in Luxembourg

Also reported through the Newsletter on 6 June 2023, ClearVue conducted a showcase event at Luxembourg's Building Training Institute (**IFSB**)² headquarters.

In collaboration with Luxembourg's IFSB Building Sector Training Institute, ClearVue demonstrated the company's ability to generate energy from a clear window. In attendance were a select group of major construction company CEOs plus Luxembourg's Minister of the Economy and Minister of Energy.

Please see the [Newsletter](#) for more information.

¹ See: <https://rms.arc.gov.au/RMS/Report/Download/Report/a3f6be6e-33f7-4fb5-98a6-7526aaa184cf/247>

² See: www.ifsb.lu

New Academic Paper

As reported in the Newsletter and after quarter end, on 12 July 2023 a new scientific paper entitled “Field Performance Monitoring of Energy-Generating High-Transparency Agrivoltaic Glass Windows”³ highlighting the outcomes of the ClearVue Greenhouse trial at Murdoch University was published in peer-reviewed journal MDPI Technologies.

Preparation of the paper follows continuous monitoring of the Murdoch Greenhouse over the period of two years. Key findings highlighted in the paper are as follows:

- Long-term daily energy generation data revealed relative stability of daily energy outputs throughout seasons. The season-dependent variations in the daily energy harvest were relatively small. The data confirmed that ClearVue solar windows are suitable for efficient solar energy harvesting in adverse environmental conditions (e.g. during rainy winter days), even when installed at a range of different azimuth and tilt angles, in an agricultural setting where dust contamination from nearby land areas is also a factor.
- Murdoch University Solar Greenhouse demonstrated a relatively stable energy production output, despite having a large area of vertically oriented windows, and on some rainier days even outperformed a reference standard residential 6.6 kWp PV panel installation mounted on an optimally tilted roof area.
- Significant energy savings were demonstrated in greenhouse grow-rooms fitted with ClearVue solar windows, which demonstrated approximately 40% of total (season-averaged) energy self-sufficiency, due to the renewable energy generated.

BCA Skylab Testing – Singapore

ClearVue has a strong commitment to having best available data on our products and solutions. To this end and as previously announced through the Company’s 22 November 2022 Update and its 31 January 2023 Quarterly Update ClearVue is once again working with the Building and Construction Authority (BCA) in Singapore who operate the world-leading Skylab facility to independently test energy generation and thermal performance of ClearVue’s glass units.

Phase 2 testing formally commenced on 17 July 2023 on the improved Generation 2 product design for its ClearVue PV[®] solar vision glass and new spandrel glass solution (referred to above) and is expected to continue for up to four weeks for data collection depending on weather variation.

Phase 3 testing with extremely low SHGC double glazing products is expected to commence in mid-August 2023 immediately after Phase 2 testing is completed.

The Company looks forward to updating the market on testing results and data in due course.

Corporate & Financial

As of 30 June 2023, the Company had a cash balance of approximately AUD \$5.208m.

The attached Appendix 4C provides details on the cashflows for the quarter ended 30 June 2023. The Company recorded net operating cash outflows during the quarter of AUD \$2.028m including for research and development costs (\$532k), product manufacturing and operating costs (\$51k), expenditure on advertising and marketing (\$137k), staff costs (\$682k) and administration and corporate costs including interest paid (\$959k). Grants and rebates returned \$320k to the Company during the quarter. Please refer

³ See: <https://clearvuepv.us8.list-manage.com/track/click?u=bbc7e19b4e39bfb2d2f74cd55&id=5219b7bab&e=727f4a5205>

to attached Appendix 4C for further information.

In the quarter ending 30 June 2023 payments totalling approximately AUD\$132k were paid in respect of executive director salaries, director's fees and fees paid to related parties, or associates of a related party, of the Company. Such payments comprised of: company secretarial service fees paid to Ventnor Capital Pty Ltd (a related entity of retired director, Mr Stuart Carmichael). All such payments to associates of directors were made on an arms-length basis.

Authorised by the Board of ClearVue Technologies Limited.

FOR FURTHER INFORMATION, PLEASE CONTACT:

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ABOUT CLEARVUE TECHNOLOGIES LIMITED

ClearVue Technologies Limited (ASX: CPV) is an Australian technology company that operates in the Building Integrated Photovoltaic (BPIV) sector which involves the integration of solar technology into building surfaces, specifically glass and building façades, to provide renewable energy. ClearVue has developed advanced glass technology that aims to preserve glass transparency to maintain building aesthetics whilst generating electricity.

ClearVue's electricity generating glazing technology is strategically positioned to compliment and make more compelling, the increased use of energy-efficient windows now being regulated in response to global climate change and energy efficiency goals.

Solar PV cells are incorporated around the edges of an Insulated Glass Unit (IGU) used in windows and the lamination interlayer between the glass in the IGU incorporates ClearVue's patented proprietary nano and micro particles, as well as its spectrally selective coating on the rear external surface of the IGU.

ClearVue's window technology has application for use in the building and construction and agricultural industries (amongst others).

ClearVue has worked closely with leading experts from the Electron Science Research Institute, Edith Cowan University (ECU) in Perth, Western Australia to develop the technology.

To learn more please visit: www.clearvuepv.com

FORWARD LOOKING STATEMENTS

Statements contained in this release, particularly those regarding possible or assumed future performance, revenue, costs, dividends, production levels or rates, prices or potential growth of ClearVue Technologies Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

Appendix 4C

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

Name of entity

| |
|-------------------------------|
| ClearVue Technologies Limited |
|-------------------------------|

ABN

| |
|----------------|
| 45 071 397 487 |
|----------------|

Quarter ended ("current quarter")

| |
|--------------|
| 30 JUNE 2023 |
|--------------|

| 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 | - | 119 |
| 1.2 Payments for | | |
| (a) research and development | (532) | (1,425) |
| (b) product manufacturing and operating costs | (51) | (172) |
| (c) advertising and marketing | (137) | (340) |
| (d) leased assets | - | - |
| (e) staff costs | (682) | (1,723) |
| (f) administration and corporate costs | (959) | (3,412) |
| (g) intellectual property costs | - | - |
| 1.3 Dividends received (see note 3) | - | - |
| 1.4 Interest received | 16 | 56 |
| 1.5 Interest and other costs of finance paid | (3) | (12) |
| 1.6 Income taxes paid | - | - |
| 1.7 Government grants and tax incentives | 320 | 1,247 |
| 1.8 Other | - | - |
| 1.9 Net cash from / (used in) operating activities | (2,028) | (5,662) |

| | | |
|--|-------|-------|
| 2. Cash flows from investing activities | | |
| 2.1 Payments to acquire: | | |
| (a) entities | - | - |
| (b) businesses | - | - |
| (c) property, plant and equipment | - | (15) |
| (d) investments | - | - |
| (e) intellectual property | (442) | (790) |

| Consolidated statement of cash flows | Current quarter \$A'000 | Year to date (6 months) \$A'000 |
|---|----------------------------|---------------------------------------|
| (f) other non-current assets | (13) | (390) |
| 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) | - | - |
| 212. Other (provide details if material) | - | - |
| 5 | | |
| 2.6 Net cash from / (used in) investing activities | (455) | (1,195) |

| | | |
|---|----------|------------|
| 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 | - | 200 |
| 3.4 Transaction costs related to issues of equity securities or convertible debt securities | - | - |
| 3.5 Proceeds from borrowings | - | - |
| 3.6 Repayment of borrowings | - | (43) |
| 3.7 Transaction costs related to loans and borrowings | - | - |
| 3.8 Dividends paid | - | - |
| 3.9 Other | - | - |
| 3.10 Net cash from / (used in) financing activities | - | 157 |

| | | |
|---|---------|---------|
| 4. Net increase / (decrease) in cash and cash equivalents for the period | | |
| 4.1 Cash and cash equivalents at beginning of period | 7,686 | 11,810 |
| 4.2 Net cash from / (used in) operating activities (item 1.9 above) | (2,028) | (5,662) |
| 4.3 Net cash from / (used in) investing activities (item 2.6 above) | (455) | (1,195) |

| 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) | - | 157 |
| 4.5 | Effect of movement in exchange rates on cash held | 5 | 98 |
| 4.6 | Cash and cash equivalents at end of period | 5,208 | 5,208 |

| 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 | 5,132 | 7,630 |
| 5.2 | Call deposits | 56 | 56 |
| 5.3 | Bank overdrafts | - | - |
| 5.4 | Other (credit cards) | - | - |
| 5.5 | Cash and cash equivalents at end of quarter (should equal item 4.6 above) | 5,208 | 7,686 |

6. Payments to related parties of the entity and their associates

6.1 Aggregate amount of payments to related parties and their associates included in item 1

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

**Current quarter
\$A'000**

132

-

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

Payments comprised:-

- Legal fees paid to Steinepreis Paganin, a related entity of director, Mr Roger Steinepreis
- Fees paid to Ventnor Capital Pty Ltd, a related entity of director, Mr Stuart Carmichael, for company secretarial services
- Fees paid to Luminare Pty Ltd, a related entity of director, Victor Rosenberg, for management services.
- Executive director salaries
- Non-executive director fees

All payments to associates of directors were on arms-length terms.

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

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 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.

N/A

| 8. Estimated cash available for future operating activities | \$A'000 |
|---|----------------|
| 8.1 Net cash from / (used in) operating activities (Item 1.9) | 2,028 |
| 8.2 Cash and cash equivalents at quarter end (Item 4.6) | 5,208 |
| 8.3 Unused finance facilities available at quarter end (Item 7.5) | - |
| 8.4 Total available funding (Item 8.2 + Item 8.3) | 5,208 |
| 8.5 Estimated quarters of funding available (Item 8.4 divided by Item 8.1) | 2.6 |

8.6 If Item 8.5 is less than 2 quarters, please provide answers to the following questions:

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

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

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

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 July 2023

Authorised by: By the Board

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(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.