

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

## ClearVue and Nodis participate in US Air Force Evaluation

## **HIGHLIGHTS**

- Nodis and ClearVue have undertaken a first phase evaluation for the US Air Force at Tyndall Air Force Base in Florida trialing Nodis' dynamic switchable glazing powered by ClearVue's photovoltaic window technology
- The evaluation is demonstrating to the US Air Force that significant energy savings, energy generation and sustainability impacts can be achieved by combining ClearVue's PV window technology with Nodis electronically controlled tinting solution
- Phase 2 of the evaluation with the US Air Force commenced in November 2021 with glazing solutions from ClearVue and Nodis; further installation at Tyndall Air Force Base is planned for June 2022
- Nodis and ClearVue intend to seek combined product sales from the US Air Force upon a successful evaluation
- ClearVue and Nodis have signed a Collaboration Agreement in support of joint opportunities, with the parties potentially entering a joint Supply Contract

**30 May 2022**: Smart building materials company ClearVue Technologies Limited (**ASX:CPV OTC:CVUEF**) ('*ClearVue'* or the '*Company'*) is pleased to announce its participation in an evaluation with Nodis Pte Ltd for a combined electrically switchable (or tuneable) window solution for the US Air Force.

The two companies have signed a Collaboration Agreement for the purposes of exploring ongoing joint opportunities with the US Air Force including smart window supply contracts, as detailed below.

Initial collaboration discussions between ClearVue and Nodis commenced in March 2018. In early 2021, Nodis commenced evaluation with the US Air Force for a first proof-of-concept solution combining Nodis' TruTint™ switchable film with a ClearVue PV window deployed into a building operated by the US Air Force Civil Engineering Center. A first demonstration of this was shown to the US Air Force on 6 May 2021.

Nodis is a world leader in the development of a pioneering dynamic switchable glazing technology that uses Dipole Nanoparticle Suspension (or DNPS) to create an optical shutter system to block light transmission through glass. The Nodis product, marketed as TruTint<sup>TM</sup>, uses colour-coated nanoparticles, which are suspended in microscopic wells inside a nanoimprinted film and sandwiched between two sheets of glass. Electric power is connected to each side of a conductive film coating to create a low-cost, instantly switchable piece of smart glass with infinite tints and colours. By combining film layers containing red,

green and blue nanoparticles to create low power, flexible digital displays within traditional window glazing is also possible.

Nodis has also been involved in a separate trial with Ohio State University's Center for Design and Manufacturing Excellence (CDME) and the US Department of Defense Office of Economic Adjustment's Supply Base Resilience and Diversification (SBRD) Program for exploration and development of 'Camouflage Glass' for potential deployment into DoD 'Warfighters'. In this trial the Nodis smart glass technology is being used to create glass that adapts to its environment – acting as active camouflage.

## Phase 1 of the Evaluation Completed

Phase 1 of the evaluation involved installation of several Nodis TruTint<sup>TM</sup> smart glass windows and a single ClearVue PV window implementing a PV smart glass unit at an evaluation being conducted at Tyndall Air Force Base in Florida, USA (https://www.tyndall.af.mil/). Nodis TruTint<sup>TM</sup> smart glass film was used to control the tint level and thereby the amount of light and infrared entering a US Air Force building, with control coming from Nodis' Window Control System using IoT and powerline communications technologies.

As part of the Phase 1 evaluation, Nodis monitored the PV performance from the single combined PV smart glass panel via a solar charge controller which charges a battery enabling autonomous smart glass operation. Day to day PV smart glass performance continues to be monitored via remote monitoring.

### Phase 2 of the Evaluation has now commenced

Phase 2 of the evaluation commenced in November 2021 but will now add an additional four ClearVue PV power generating windows in combination with Nodis' TruTint<sup>™</sup> film. The additional ClearVue units were delivered during April 2022 and are expected to be deployed at the Tyndall Air Force Base in June 2022, with testing and evaluation to be completed in August 2022, along with final evaluation and reporting shortly thereafter.

Following a successful Phase 2 evaluation by the US Air Force, Nodis will seek a third phase commercial engagement of Nodis and ClearVue to supply smart windows and glazing for upcoming US Air Force building projects.

#### Collaboration Agreement Signed

ClearVue and Nodis entered into a Collaboration Agreement on 27 May 2022 which outlines the parameters for commercial engagement (*Phase 3*) and more generally.

The Collaboration Agreement sets out the terms for collaborating on the promotion and joint development of ClearVue's photovoltaic IGU and smart solar window solutions combined with Nodis' TruTint™ dynamic switchable film.

Under the terms of the Collaboration Agreement, ClearVue and Nodis will work collaboratively together to:

- Complete the Phase 2 evaluation demonstrating a combined product (an initial prototype(s) combining
  the intellectual property and technologies of both Nodis and ClearVue) before taking current proof-ofconcept demonstrations and creating a commercial format product in line with a project plan agreed to
  by both Parties (*Commercial Prototype(s)*); and
- continue discussions for establishing a commercial Supply Agreement where one Party supplies to the
  other for inclusion into a combined end-product for supply of windows to the US Air Force (or other
  customers) as part of Phase 3; or



• alternatively, enter a joint venture or other arrangement where the Parties' two products and technologies are combined into one final end-product based on the Commercial Prototype(s), that the Parties can both promote together.

Commenting on the Collaboration Agreement, Executive Chairman of ClearVue, Victor Rosenberg said:

"The Nodis TruTint™ product is at the cutting edge of the smart glass industry and is a perfect fit for ClearVue's photovoltaic glazing solution. Nodis' Dipole Nanoparticle Suspension dynamic glazing solution requires power inside the IGU or window to operate the control systems for switching and dimming the glass, and for powering and maintaining the state change in the Nodis DNP layer — which together we have already demonstrated through the Phase 1 evaluation with the US Air Force. To date, the combined Nodis and ClearVue solution has demonstrated the benefits of both solutions to the US Air Force: energy savings and energy generation offering a clear impact on sustainability and a path towards Net Zero. The next step is to complete Phase 2 of the US Air Force evaluation with Nodis and then to scale and commercialize a combined product for potential sales to the US Air Force and others."

Commenting on the Collaboration Agreement, Chief Executive Officer of Nodis, Michael Holt said:

"The ClearVue PV IGU solution has demonstrated itself to be a great fit for use in supplying localised power to Nodis'  $TruTint^{TM}$  smart glass film. Getting power to windows, especially in a retro-fit application, has been historically difficult and expensive. A Nodis  $TruTint^{TM}$  DNP glazing system combined with ClearVue PV and battery and can be deployed without the need for wiring to the window. Where wiring is used, our solution also uses powerline control of the windows themselves removing the risk of over-the-air hacking of the glazing inherent in wireless control methods using WiFi, Bluetooth or other communications protocols. We are looking forward to working with ClearVue on completion of our customer evaluations and then, subject to success of the same, look forward to working with ClearVue to explore licensing and sales opportunities together under the new Collaboration Agreement and more formal agreements that will follow."

The Company looks forward to updating the market on the evaluation with the US Air Force and to its progress under the Collaboration Agreement.

Authorised by the Board of ClearVue Technologies Limited.

#### FOR FURTHER INFORMATION, PLEASE CONTACT:

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#### **ABOUT NODIS CORP**



Nodis' TruTint™ smart glass technology enables glass to switch instantly from clear to opaque and any tint or colour in between. This allows for precise light, glare, and infrared control increasing a building's energy efficiency and liveability while transforming any piece of glass into a transparent display. TruTint can reduce electricity usage and greenhouse gas emissions by 40% and is capable of significantly lowering a building's energy costs. Maximizing natural light while controlling glare and infrared has been shown to improve productivity and mood while reducing headaches and eyestrain. TruTint's revolutionary nanoparticle film is 10x lower cost to produce and integrate into new glass manufacturing or aftermarket glass products.

For more information visit: www.nodiscorp.com

#### **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.

