

## DSC: A beautiful future emerges in Korea

**Queanbeyan, Australia – 19 March 2012** — Next generation Dye Solar Cell (DSC) windows being showcased at the Human Resource Development Centre of the Seoul City Government in South Korea demonstrate that – not only can DSC applications turn buildings into power plants – they also create enormous opportunities for architects to design clean energy generating buildings that are at the cutting edge in style.

Manufactured by Eagon Industrial Co. Ltd. – a large Korean glass fabrication company specialising in window and door systems – the striking windows pictured below which form part of the installation employ a glass treatment to create a beautiful and funky geometric pattern - a modern-day stained glass window generating clean, renewable electricity from sunlight.

The DSC modules (tiles) used in the window systems installed at Seoul City's Human Resource Development Centre, were produced and supplied by Dyesol Limited's Korean joint venture partner, Timo Technology, using Dyesol DSC materials, technology and know-how.

The Seoul Economic Times reported on March 14<sup>th</sup>, that this DSC window installation is the first in South Korea and is a beautiful showcase building for DSC technology. Other reporting indicated that if this showcase is successful Seoul City will expand this initiative through the application of DSC BIPV into other buildings. Seoul City Government is applauded for this outstanding initiative.





Dye Solar Cell technology is a biomimetic nanotechnology that emulates the natural process of photosynthesis. Using a layer of titania, electrolyte and ruthenium dye sandwiched between glass, DSC technology generates electricity when light striking the dye activates electrons which are absorbed by the titania to become an electric current.

Dyesol-Timo's testing program in Seoul supports DSC's superior performance as measured and reported in other locations around the world in real-world solar conditions (i.e. cloudy days) and non-optimum orientation (i.e. vertical), confirming the significant potential for DSC to be fully integrated into the building fabric including facades and windows.

Dyesol-Timo was formed in 2008 with Timo Technology providing a technology development and manufacturing expertise and Dyesol providing its DSC expertise, materials and equipment solutions to develop products and



establish the venture's prototype line. This prototype manufacturing line provides the springboard for commercial product development and any push to volume manufacturing.

Since 2008, the team has been working steadily and both companies have made crucial financial and personnel investments in the joint venture. Dyesol is the holder of the principal intellectual property underpinning the venture, and is the DSC materials (high value-add dyes, pastes and electrolytes) supplier.

This DSC showcase project in South Korea is a significant milestone in the pathway to the large-scale commercial application of DSC in the built environment, providing application data crucial in focussing product development activities needed before scaling up manufacture. It clearly demonstrates that DSC is poised to make a significant impact on the energy footprint of buildings, where the building fabric becomes an active power generator.

Dyesol acknowledges the Seoul Economic Times and Dyesol-Timo internal reporting for part of the information used in this release.

## About DYESOL Limited

Dyesol is a global supplier of Dye Solar Cell (DSC) materials, technology and know-how. DSC is a photovoltaic technology enabling metal, glass and polymeric based products in the building, transport and electronics sectors to generate energy and improve energy efficiency. Dyesol partners with leading multinational companies who possess significant market share and established routes-to-market. The company is listed on the Australian Stock Exchange (<u>DYE</u>), the German Open Market (<u>DSLF</u>), and is trading on the OTCQX (<u>DYSOY</u>) through its depositary BNY Mellon. Learn more: <u>www.dyesol.com</u> Subscribe to Mailing List and eNewsletter <u>here</u>.

## About the Technology – DYE SOLAR CELLS

DSC technology can best be described as 'artificial photosynthesis' using an electrolyte, a layer of titania (a pigment used in white paints and tooth paste) and ruthenium dye deposited on glass, metal or polymer substrates. Light striking the dye excites electrons which are absorbed by the titania to become an electric current. Compared to conventional silicon based photovoltaic technology, Dyesol's technology has lower cost and embodied energy in manufacture, it produces electricity more efficiently even in low light conditions and can be directly incorporated into buildings by replacing conventional glass panels or metal sheets rather than taking up roof or extra land area.

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