



# Viridian Sustainability Covenant Second Year Review

The Viridian sustainability covenant, the first covenant entered into with a manufacturer, was signed on 1 March 2007.

This report covers the reporting period from 1 March 2008 to 1 March 2009.

As well as providing some background on the development and objectives of this covenant, this report presents a review of the key initiatives, activities and outcomes during the covenant's second year.

## Background to the Viridian sustainability covenant

The sustainability covenant is a four-year voluntary agreement between Viridian, EPA Victoria, the Australian Industry Group ('Ai Group') and Sustainability Victoria to work together to protect the environment and to contribute to a more sustainable Victoria.

## Objectives of the sustainability covenant

The overall objectives of this covenant are to:

- support product innovation to deliver greater resource efficiency from the life-cycle benefits of coated glass
- build and develop a partnership between EPA, Viridian, Ai Group and Sustainability Victoria that takes the relationship beyond site-based issues to incorporate consideration of environmental impacts across the life cycle, product innovation and the business opportunities this presents
- demonstrate the business opportunities and benefits, including increased profitability, productivity and growth, from establishing sustainability as a framework for business both for Viridian and as a model for Victorian industry.

## Highlights of the partnership in the covenant's second year

- The \$130 million upgrade of Viridian's Dandenong glass manufacturing plant has been completed. Energy efficiency improvements of 13 per cent are anticipated.
- Glass-coating capability, to improve the energy efficiency of the product, has been installed at the Dandenong plant, with commissioning carried out in April 2009. The Dandenong plant now has the only glass-coating facility of its type in the Southern Hemisphere.
- As part of the EPA works approval, a feasibility study about generating electricity from waste heat at the Dandenong plant has been completed. The finding was that two megawatts of electrical generation is technically available but not commercially viable. Suitable connection ports were installed during the major upgrade to allow waste energy recovery in the future should it become commercially viable.
- Work has commenced on developing an industry-wide strategy to deliver more sustainable outcomes from windows and glazing products to the residential sector.
- An interactive display unit to demonstrate the benefits of energy-efficient glass has been designed, built and tested. Positive reaction to the trial unit has resulted in the decision to build and deploy a fleet of 55 of the interactive display units. Construction of these additional interactive display units has started.

# Progress against commitments

The focus of the first phase of the covenant, with duration of two years, is:

- ensuring the environmental and societal benefits of product innovation in glass-coating technologies are realised in the marketplace
- capturing the benefits of incorporating sustainability into core business as a model to apply to Viridian's other product lines and Viridian's business strategy in the second phase of the covenant. This will include life cycle assessment, CAPEX processes, the ongoing goal of zero waste and product innovation across the entire business.

Below is a report on the main achievements under each of the covenant's commitments:

Commitments	Achievements
Promote energy-efficient glazing systems and glass products (coated glass, double glazing, glass for solar energy applications) to generate market growth to a minimum of 20% of Viridian sales.	<p>Viridian has been working with EPA Victoria and Sustainability Victoria to develop demonstration kits that display the benefits of energy-efficient glass. A fleet of 55 interactive display units are being built and will be deployed by mid-year 2009.</p> <p>The display units are the key items in an Australia-wide promotion, financially supported by \$150,000 from Sustainability Victoria's Resource Smart Business Program. Overall this project is expected to cost \$500,000.</p> <p>The display units feature samples of different glass types – including standard window glass and more energy-efficient varieties – set in front of a light bulb. The conventional window glass transmits almost all of the heat from the bulb, in marked contrast to the energy-efficient glass, which blocks most of the heat. Visitors can feel the difference in the heat passing through the glass. They are expected to be seen by 100,000 people over the next three years.</p> <p>EPA and Sustainability Victoria have continued to promote the benefits of energy-efficient buildings and products through formal and informal networks and forums including the Carbon Innovators Network and designEX 2009.</p>
Introduce technology that allows Viridian to produce energy-efficient glazing systems and glass products that have high environmental and societal value. Products include, for example, coated glass, double glazing and solar energy applications.	<p>The Dandenong plant's \$130 Million upgrade is nearly complete. Glass production recommenced in November 2008. A high-tech coating facility to produce a hard coated energy-efficient 'low-e'™ glass has been installed on the glass float line and was commissioned in April 2009.</p> <p>A fully automated glass processing and double-glazing unit manufacturing facility has been installed at Viridian's Clayton site. This facility is currently undergoing commissioning.</p>
Quantify the societal and environmental value of energy-efficient glazing systems.	<p>Viridian has taken a leading role in bringing together the two industry bodies serving the Australian window and glass manufacturing sector. The Australian Windows Association (AWA) and the Australian Glass and Glazing Association (AGGA) have formed a special vehicle, Sustainable Windows Australia (SWA), to build the scientific and economic basis for quantifying the impact of using energy-efficient windows in residential buildings, and then to develop an industry strategy to drive the uptake of these components in the residential sector. The scientific and economic analysis, along with the industry strategy, will be delivered in 2009. This project is being supported by \$200,000 funding from Sustainability Victoria, \$150,000 from the associations and \$25,000 from Viridian.</p>
Capture and promote the benefits of incorporating sustainability into core business as a model to apply to Viridian's other product lines and Viridian's business strategy.	<p>CSR purchased Pilkington's Australian and New Zealand operations and DMS Glass in 2007, combining them to create Viridian. These purchases were part of CSR's strategy of creating a building products business with a strong portfolio of brands and products focused on incorporating sustainability into the built environment.</p> <p>CSR is highly supportive of the Viridian sustainability covenant. CSR is bringing a range of more sustainable products to market; for example, Hebel, a new lightweight masonry product, and the Edmonds roof ventilation range, along with Gyprock ECOBTM, a better performing plasterboard with an increased level of recycled material.</p>
Promote the role of glass products in helping to deliver the Victorian Government's policy objectives and commitments outlined in <i>Our Environment, Our Future – Sustainability Action Statement 2006</i> and <i>Energy for Victoria</i> .	<p>Work done by Sustainable Windows Australia on economic and scientific validation of energy reductions achieved will also be used to model and quantify the reduction in emission of greenhouse gas delivered by the adoption of energy-efficient glass and windows. This work will provide the factual basis for promoting the role glass products play in developing a more sustainable residential sector through the use of energy-efficient glass.</p> <p>The Hon. John Lenders MP, Treasurer of Victoria, officially opened the Dandenong plant upgrade and toured the site.</p>
Continue to pursue the goal of zero waste at Viridian sites through identification and implementation of both incremental and step change improvements in the reduction of waste.	<p>A conceptual study to capture waste heat for conversion into power has been completed and connection ports installed to allow this project to proceed when financially feasible.</p> <p>Furnace upgrade completed with resource efficiency principles incorporated in the design. In a first for Victoria, resource efficiency modelling of the proposed upgrade was presented in the works approval. Adoption of energy-efficient technologies was supported by funding from Sustainability Victoria. Water conservation and heat recovery designs have delivered dramatic improvements and align the upgraded plant to world-best practice.</p> <p>Environment and Resource Efficiency Plan (EREP) and WaterMAP in place at key Viridian sites in Victoria.</p>

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