

CASE STUDY 11

Painting the sky... blue

Who: Melbourne Airport

Where: Australia

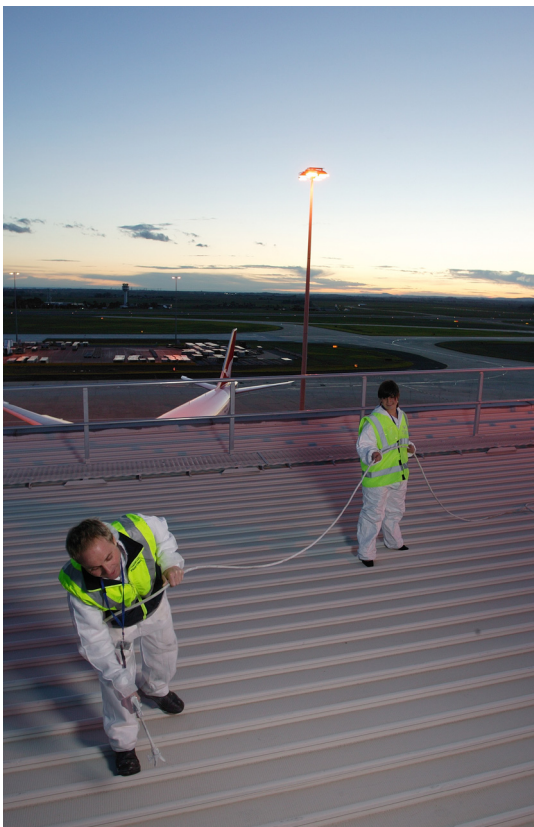
What: New paint applied to roof of the terminal building

When: 2006

Why: Cuts down on energy usage

Project

In Australia, a large number of buildings are constructed with steel roof panels. Under hot temperatures, these roofs can pass heat into the buildings. Melbourne Airport has applied more than 35,000 square metres of an Australian-developed paint called 'SkyCool' to terminal roofs. This paint is specifically designed to reduce 'heat gain' within the building, resulting in less use of air conditioners throughout the terminal. The unique attribute of SkyCool paint is its ability to act as a black body radiator of infrared energy (heat).



Result

Over an 18-month period the SkyCool paint has helped to save more than 40,000 tonnes of CO₂ through a reduction in air conditioning use. Tests by the University of Sydney and results from trials in the field suggest that SkyCool paint applied to supermarket roofs results in a much cooler building, requiring 40 to 50% less air conditioning than a roof painted with normal paint.

	Roof temp.	Interior
Unpainted	56°	41°
SkyCool™	33°	27.5°

Part of a wider energy audit

Melbourne Airport investigated SkyCool paint following a comprehensive energy audit completed in early 2006. The recommendations from the report that have been implemented at Melbourne Airport include:

- Installing nearly 500 energy-efficient light bulbs.
- Installing darker tinting on the vast expanses of terminal windows to reduce the heat entering the building.
- Inserting special foam balls into the air conditioning supply system – these help to keep the internal pipes clean, reduce maintenance and aid in the efficient operation of the overall system.

As a result of these measures, Melbourne Airport has been able to make significant reductions to the amount of air conditioning used, whilst still ensuring the terminals remain cool.

Previously during the summer period, the terminal building required four chillers operating at around 100 percent capacity. Now, three chillers running at around 80 percent capacity fulfil the terminal's needs.



Company profile:

Australia Pacific Airports Corporation Limited (APAC) operates two Australian airports – Melbourne and Launceston. Both airports are operated under a 50-year long-term lease from the Australian Government, with an option for a further 49 years. APAC is a majority Australian-owned company.

Melbourne Airport serves Australia's second-largest city and handles over 22 million passengers and 180,000 aircraft movements annually.

www.melbourneairport.com.au

