RETROFIT LIGHTING FOR FIRE STAIRS AND CAR PARKS

Looking at the results from ISPT's recent retrofit of LED fittings in one Sydney property, the savings are clear, writes Paula Wallace.

As part of its commitment to owning and operating an environmentally sustainable portfolio, ISPT – one of Australia's largest unlisted property funds with more than $7 billion in funds under management – has upgraded the lighting at one of its Sydney properties.

477 Pitt St is a 34-storey A-grade commercial office tower opposite Central Railway Station, with an adjacent 10-storey wing above two levels of retail including a post office, food court, medical centre and newsagency.

Undertaken by property managers Knight Franks and enLighten Australia, the project focused on the retrofit of lighting in the office tower's two sets of fire stairs, car park egress paths and car park bays for a 300-space, two-level underground car park.

Essentially it involved the replacement of T8 36-watt fluorescent fixtures operating 24 hours a day with multi-function light emitting diode fittings.

Completed in January this year, the project had a capital cost of $116,964 – including installation – and attracted an energy efficient rebate and estimated return on investment of 1.5 years including its energy savings certificates.

The property owners are applying for ESCs generated from the commercial lighting upgrade project under the New South Wales energy savings scheme. The project's accredited certificate provider has indicated that 1430 certificates will be generated from the project. Calculated at the current rate for ESCs of $22, the value of the rebate will be $31,460.

The project also resulted in a ¼ star improvement to its 4 star NABERS rating.

Sustainability initiatives implemented across the ISPT commercial property portfolio since 2006 have resulted in $10.5 million savings to ISPT core fund investors through electricity, gas and water savings.

The average weighted NABERS rating for the portfolios base building is more than 4 stars, with a target average rating increase to 4.5 stars by June 2012.

From left: Chamaeleon carpark occupancy mode; existing T8 carpark installation Chamaeleon lift lobby in occupancy mode.

The retrofit resulted in 401 Chamaeleon lights replacing 802 T8 tubes, producing the same light output levels. Both 8- and 10-chip Chamaeleon emergency lights were installed in fire stairs and car park egress paths and standard Chamaeleon lights were installed in the car park bays.

Fire stair meter data supplied by Knight Frank indicated an average 85% reduction in lighting electricity usage. Monthly electricity usage across the two tower fire stairs dropped from a pre-installation average of more than 8400 kilowatt hours to a post installation average of 1250kWh.

Indicative car park meter data provided by the metering system also revealed a significant reduction in energy usage.

The Chamaeleon delivers energy savings through its dual lighting circuit, which operates on a standby level of light during unoccupied periods.

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The average standby usage is 8.5W, which increases to 28W when a presence is detected in the area via the microwave sensor.

"With a clear financial benefit, LED lighting has come of age," said David Whitfield, CEO and co-founder of enLighten. "Lighting accounts for more than 20% of energy cost in commercial and retail markets and with the introduction of the carbon tax and rising electricity prices this cost is likely to increase exponentially."

On the back of the success of the Chamaeleon installation, the property owners have also recently given the go ahead for a trial of enLighten's new Velorum troffer solution in the tenancy occupied areas of the building.

The Velorum is suitable for replacing existing T8 and T5 fluorescent lighting in grid ceiling applications. An ideal retrofit solution for CBD program tenancy lighting assessments, the Velorum claims to deliver more lumens per watt than other LED products on the market. WME