

Melissa Cake Shop Eco Lighting Case Study

**The pastries are great, the coffee is excellent,
a shining example of a cafe!**

Case Study Key Findings

- A **58%** reduction in electricity for lighting.
- Savings of over **\$3,687** per annum on electricity.
- A reduction of **30 tonnes of CO² emissions** per year.
- On top of that, there are savings of **\$750** per annum in maintenance costs.
- A return on investment in just under a year (11 months)!
- Cost of retrofit: **\$3,943**.

About Melissa Cake Shop

Melissa Cake Shop, located at 661 High Street, Thornbury, is a family run business that offers a great line of cakes and pastries.

Melissa's is particularly famous for its spanakopita, a savoury delight consisting of spinach and feta cheese wrapped in layers of filo pastry.



Before the Eco Lighting Retrofit

Prior to the eco lighting retrofit, Melissa's was filled with 113 Halogen 50 watt downlights and four Linear Fluoro 40 watt lights. The annual electricity bill for lighting was **\$6,329**.



After the Eco Lighting Retrofit

After conducting a systematic lighting audit at Melissa’s, the eco lighting experts at the Environment Shop reduced the energy consumption of the lighting by **58%**. Table One below shows the lights that were replaced during the retrofit, including the details about the globes replaced and the wattage per globe.

Original Item	No.	Consumption Power (W)	Total	Efficient Lighting Replacement Item	No.	Consumption Power (W)	Total
Fluorescent 36w	4	40	160	T5 Adapter	4	28	112
Halogen Lamps 50w	113	55	6215	Halogen IRC 35w	34	35	1190
				Halogen IRC 20w	6	20	120
				CLA Downlight	65	15	975
				LED 6w	8	6	48
			6375				2445

Table One: Original and efficient lighting replacements during the retrofit

“I was slightly sceptical when I was first approached to retrofit the lights in my business. I focussed first on the up front costs, but quickly moved my attention to the long-term savings in electricity and maintenance bills” said Ange Katakis, Owner, Melissa Cake Shop.

Ange Katakis added “Melissa’s is open 7 days a week, 12 hours a day, so we arranged for the retrofit team to work overnight. This worked well, as it did not disrupt my business.”

“I am very pleased with the lighting design, in particular the CLA downlights with the frosted glass over the lamp fitting” said Ange Katakis. In addition to looking great, the CLA downlights are 27% more efficient and last 4 times longer than the original Halogen downlights they replaced.

The ambience at Melissa’s is warmer and more inviting than ever, with substantially less impact on the environment (a saving of **30 tonnes of CO² emissions per annum**).

Ange Katakis added “Now I look forward to my next electricity bill – but now can you help me reduce the electricity used in my ovens!” Melissa’s has reduced its lighting costs by **\$4,439** a year as a result of this eco lighting retrofit.

About the Eco Lighting for Victorian Business Project

The Eco Lighting for Victorian Business Project aims to demonstrate the latest energy saving lighting technologies to business and organisations. The Project is supported by the Victorian Government Sustainability Fund, managed by Sustainability Victoria.

The Project is funded by the Sustainability Fund with the management being conducted from the Environment Shop. Other partners include the Alternative Technology Association, the Cities of Darebin, Banyule and Hume, Moreland Energy Foundation (MEFL), Northern Area Greenhouse Alliance (NAGA), VECCI Grow Me the Money, Megaman Australia, CLA and Low Energy Developments.

