



TIP TOP BUTCHERS - Victoria, Australia

Designed and installed by Euan Angus Solar

REQUIREMENTS

Reduce cost of electricity for plant

PROJECT SPECS



SYSTEM SIZE

203kW



PRODUCT

**LG Mono X
360W**



ESTIMATED ANNUAL OUTPUT

Approx. 268,000kWh



INSTALLED

December 2013



BENEFITS



Estimated reduced costs by **Approx. 33%**
and savings of **Approx. \$ 40,000 AUD per annum¹**
Approx. 247 tonnes of CO₂ emission avoided per annum²

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BACKGROUND

As one of Victoria's leading Meat Wholesalers, Tip Top Butchers have been supplying to Melbourne hotels and restaurants for over 10 years and the general community for over 45 years.

Tip Top Butchers have very large cool rooms to store and maintain freshness and safety of their products, these cool rooms have a very high energy consumption and costs for the company.

CHALLENGE

The cool rooms consume a minimum of approximately 1300 – 1400 mWh per annum. In an effort to reduce their power bills, Tip Top Butchers engaged the Euan Angus team to design and install a solar system to address this issue.

The building was a renovated factory with significant undulations on the roof which needed to be taken into consideration during design and installation of the system.

SOLUTION

A quantity of 780 LG Mono X 260W panels were installed. The LG MonoX were ideal for this project due to their excellent performance under low light conditions and LG's own cell manufacturing with low tolerances, ensuring highly consistent performing panels. At 200W/m² LG panel efficiency drop is -2% while many standard panels efficiency drop is -4%.

The panels were installed using different height footings to suit the different levels of the roof and compensate for the undulations.

“ **Build a solar system to help reduce the company's power bill due to the large cool rooms.** ”

WHY WERE LG PANELS CHOSEN

The LG panels were recommended by the Euan Angus team for the quality, reliability and strength of the product.

LG panels have proven field performance. The LG Mono X range have been involved in a number of comparison tests against many other brand panels and have proven to be consistently among the best performing. These panels have also received additional certification including for salt mist corrosion to maximum severity 6, ammonia resistance certification and PID resistance tests.

The strict quality control of LG world-class production processes is monitored and improved to Six Sigma quality control standards, which includes 500+ monitoring points to effectively maintain and improve the uncompromising standards.



1 The estimated first year savings were provided by the solar installer, or are estimates made by LG Electronics Australia Pty Limited (LGEAP). The estimates made by LGEAP are based on the actual system size and estimated annual output of the system in the post code of the location. We assume a flat electricity rate of \$0.25, a flat feed-in tariff of \$0.11, 80% self consumption of solar generated electricity Monday to Friday, and 20% self consumption on weekends. For further details on assumptions used and other solar calculators please see: <https://www.lgenergy.com.au/solar-calculators>.

2 The estimate for CO₂ emissions avoided assumes that the entire electricity output of the system is consumed and the emission factor used is the weighted average for all Australian States based on the calculator available at carbonneutral.com.au. For more information, please see: <https://carbonneutral.com.au/carbon-calculator/>.