CASE STUDY
Barakat Pty Ltd.

ANNUAL SAVINGS
$9,838

ENERGY SUPPLIED BY SOLAR
30%

GRID-ENERGY USE
30% REDUCTION

PAY BACK PERIOD
3.5 YEARS

LEDs INSTALLED

GRID-CONNECTED SYSTEM
31.6KW

100% PERFORMANCE GUARANTEE

SUMMARY

Barakat Pty Ltd is a well established building property Trust. They selected Energy Makeovers to review their electricity costs and implement cost effective measures at one of their Bentleigh commercial properties. This included a full review of their energy demand, electricity utilisation and identification of opportunities to increase efficiency and decrease operating costs.

The Bentleigh site includes a wide range of small business tenants, such as naturopaths and tax agents with each tenancy utilizing a variety of out-dated light fittings. Multiple opportunities were identified to decrease the property's overall electrical demand while at the same time improving lighting conditions and reducing ongoing maintenance for these tenants. The site also featured an abundance of available and accessible roof space.

CHALLENGE AND SOLUTION

Energy Makeovers' first step was to improve the overall energy efficiency of the site. This was achieved by upgrading the existing conventional light fittings to LED alternatives which not only brought down electricity use but also minimized the size of the required solar system. The existing light fittings were upgraded to 52 x LED tubes, 230 x LED panels and 12 x LED downlights. The lighting upgrade alone is estimated to save Barakat $21,962 a year, in addition to the projected savings from the solar system.

Energy Makeovers then designed and installed a 31.6 kW roof top solar system to further reduce the site's dependency on the power grid. The system comprises of 115 x 275 watt Trina Honey panels - consisting of 5 strings of 23 panels - coupled to a 27 kW Austrian-made Fronius eco-inverter. The inverter was installed in a secure basement car park. The Fronius was selected because it has inbuilt string protection via inline fuses and provides real-time fault detection and rectification features.