

# ○ Solar case study: Small business



**We now rarely pay anything for electricity during the summer months. We made the decision for business reasons, and it has proved a good one. The 50 kW solar system has been a huge success:**

Shane Evans, Easdowns Business Specialists

## Project summary

Easdowns Business Specialists, installed a solar system based on pay back period and expected savings. The solar installation cost was financed over seven years. **The bill savings are greater than the annual repayments, resulting in a cash positive investment. Environmental benefits are a bonus.** This case study highlights the compelling financial returns that can be made with a properly sized solar system.

## Fast Facts

### Solar system

- A 50 kilowatt (kW) rooftop solar system
- The system is located in Wagga Wagga
- 200 x 250W polycrystalline solar panels connected to 2 x 25kW inverters

### Results

- Over 90% bill reduction during summer
- 30%–75% bill reduction in other seasons
- Feed-in tariff (FIT) of \$0.06/kWh for excess solar
- The system saves approx. 1,425 tonnes of carbon dioxide (CO<sub>2</sub>) over its lifetime

### Costs/savings

- Total installation cost of \$55,000 (\$1.10/Watt) after a small-scale technology certificate (STC) rebate of \$38,000
- The installation cost of \$55,000 is financed over 7 years
- Expected annual savings of \$14,500 and lease repayments of \$9,500

### Environmental benefits

- The system saves approx. 1,425 tonnes of carbon dioxide (CO<sub>2</sub>) over its lifetime

## About the business

Easdowns Business Specialists is an accounting, financial and business advisory firm helping a wide variety of businesses across regional NSW. Their main office is in Wagga Wagga, where the business is located in an all-electric, low-rise office building with an expansive, flat roof.

### Key Challenge

The Wagga Wagga region gets very hot in summer. Air conditioning accounts for the largest proportion of electricity bills, followed by lighting, computers and other office equipment. Together these use more than 100 megawatt hours (MWh) of electricity per year.

## Solar strategy

### Why solar?

Working with clients on solar projects, Easdowns was inspired to investigate the costs and benefits of a solar system.

Replacing an older lighting system with LEDs demonstrated the potential for cost savings through energy efficiency initiatives.

The firm was quickly convinced that with the right-sized solar system designed for their purposes, the payback could be excellent.

Generation from the solar system matches their electricity demand profile.

When the air-conditioning is working hardest in the middle of the day, the solar system is still generating electricity.

### Process – three quotes and finance

As Easdowns is a tenant in their building, their landlord had to agree to the project. Given the firm's long-term tenancy, the landlord was cooperative and approved the installation with no changes to the lease agreement.

Using calculations developed for clients, Easdowns had a good idea of the likely cost and benefits of solar.



The firm received three quotes ranging from \$55,000 to \$78,000.

All three quotes specified similar, matching Chinese panels with German inverter brands. Easdowns felt the lowest price could be accepted without risk of receiving an inferior system.

The firm sought financing for the \$55,000 cost. Their calculations indicated that the savings on their electricity bill would more than pay for the loan repayments.

The selected installer was a local company. The solar panels were installed in a north westerly direction with a tilt of around 30 degrees.

### Challenges – roof leaks

Minor roof leaks from the mounting panel system developed after the solar installation. The leaks were promptly repaired by the solar provider.

## Cash positive solar lease

The firm now has a 90% reduction in their electricity bill in summer months when solar production is high and a very small electricity bill of a few dollars.

During the winter months when electricity generated from the solar system is reduced, due to shorter daylight hours, bills are lower by around 30%.

The solar system is cash positive as the annual savings are larger than the annual repayments of the seven-year loan.

## Results

The annual electricity bill savings are \$14,500 and the annual lease repayments are \$9,500.

After seven years, the lease payments will cease and Easdowns Business Specialists will realise the full savings from the solar system.

The solar system saves:

- > 1,425 tonnes of carbon dioxide (CO<sub>2</sub>) over the solar system's lifetime, or
- > 1,478 tree seedlings grown for 10 years.