

## A GP Solar panel case study - at Rockcliffe Court Surgery

Rockcliffe Court Surgery, on the outskirts of Darlington, started thinking about getting solar panels for several reasons. Firstly, to reduce the practice electricity bill. The previous electricity contract was coming to an end and the predicted price rise would be unaffordable in the short, medium and longer term. Secondly, the senior partner has knowledge of the benefits of solar and owns an EV car. Thirdly, was to enhance the practices environmental credentials.



The annual electricity use by the practice was around 20,000 kWh. Anticipated annual electricity bill for 2023 post energy price rise : £20k

The practice had already examined their electricity use and reduced the annual amount used through a combination of staff behaviour (such as turning off unused equipment) and tech solutions (such as LED bulbs).

### Solar Panels

Installed - Dec 2022 by DMH Electrical and Renewables LTD

Size - 13.1kw

Number of panels – 32

Installation costs - £20k Including solar panels, smart EV car charger, inverter.



### Electricity generation

#### Actual results so far

In early March 2023, the amount of electricity generated on a day was 52.8kW. This covered the total electricity used on the same day of 37.5kW. Excess generated electricity was used to charge staff EV cars.

#### Expected electricity generation

Over the year, electricity generation equating to 50% of electricity used (10.5MW) is expected. The majority will be between March and October, so the actual financial savings may be less than 50% of the total annual electricity bill. However, excess electricity can be stored in batteries, EV cars or sold back to the grid.

#### 10-year costs (excluding price rises/inflation, assuming 40% reduction in bill)

	without solar (£)	with solar (£)
Annual energy used	20k	12k
For 10 years	200k	120k
Installation costs	-	20k
<b>Total (for 10 years)</b>	<b>200k</b>	<b>140k</b>
Total (for 20 years)	400k	260k