

Solar PV proposal for Chelmsford County High School for Girls

The Schools' Energy Co-operative (the Co-op) has been set up to install, own and operate solar power systems to generate electricity on the roofs of schools and other community buildings. 76 schools, 2 children's centres, 1 children's hospice and (rather anomalously, but it came with a group of schools) a warehouse have joined the Co-operative since it began in late 2014.

The Co-op receives its income from selling the electricity generated to the site and, to the extent more is generated than the site can use, to electricity companies through the grid.

Summary proposal

Your PV System

Solar PV system size (kWp)	105.48
PV surface area (m ²)	560
Number of Modules	327
Number of Inverters	3 Solis inverters

The Yield

Generation per Year (kWh)	92,297.76
Specified Yield (kWh/kWp)	875
CO2 Emissions Avoided per year (kg)	32,212

Details of the proposal

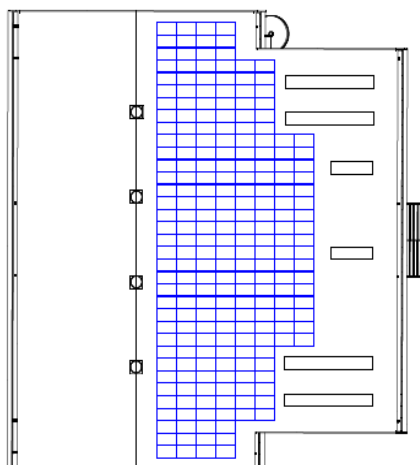
The upfront cost of to the school is £ nil. The electricity generated by the solar panels and consumed by the school will be charged to the site at a rate of **9.9 p per kWh**. This price is RPI linked for the duration of the agreement (25 years). We will install a generation and an export meter as part of the installation to calculate how much of the generated energy is used on site. We predict that the site will consume 80% of the renewable energy generated by the solar PV panels each year. Any profits made by the Co-op from this installation will be paid back to the school.

The school is paying about 14.5p/kWh for its electricity, so the initial savings for the school should be about £3,500 per annum, which should increase each year, as electricity prices are projected to increase at least in line with inflation.

The system has been designed to maximise the energy output of the installation and uses the BauderSolar flat roof PV mounting solution on the flat roof. The mounting units are secured to the roof using membrane-to-membrane welding techniques on the bituminous or single ply waterproofing systems. This installation method means that the roof is not compromised by penetrations for fixings nor is it ballasted, which reduces the additional weight loading to the roof.

On the metal roof it uses a clamp and rail mounting system that does not require any ballast either.

For the entire 25 years agreement the solar PV installation will be maintained by the Co-op at its expense. At the end of the agreement the installation will be given to the site free of charge in situ. The panels should have an estimated life of at least 15 years left in them at that stage.



Solar PV Layout

Next steps

We will be sending a Power Purchase and Licence Agreement along with this proposal for the school to consider.

We will need to seek consent from the local grid so we can connect the system to it. We will send a letter of authority template for the school to produce a similar one so we can send the application on the school's behalf.

The Co-op will arrange for a structural survey to be completed on the roofs in question. It is important to note that if the survey results show that the roof is not suitable for solar PV we will not proceed with the installation.

Once all permissions have been approved, we will work with the school to arrange a suitable time to install the solar PV system. We do not envisage that the installation will take longer than 5 days.

Our Support Team



Joju Solar are the company that we use to install our solar PV panels. They have installed 78 of the existing Schools' Energy Co-operative projects and have worked with dozens of other community groups around the country. They have always provided us with an excellent service and continue to help us keep our systems working long after the installations have been commissioned.

Contact us:

Schools' Energy Co-operative Limited

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