

## Trinity Methodist Church, Basildon

Trinity Methodist Church, in the South Essex Circuit, was built in the 1960's. The original site consisted of the worship area and a large hall, with an additional hall, classroom and kitchen added seven years later. This second wing was built for youth work, including Boys' and Girls' Brigades, and is now used for Junior Church on Sundays, as well as community use throughout the week, such as karate classes and Slimming World. The original hall is used for a church run community café, and can be hired out, and the worship area is used on Sundays and for a Wednesday evening choir.

The church wanted to do something about their electricity use and so started to consider solar panels. Another local church had already installed solar PV and an air-to-air heat pump system, so Trinity were able to see them as an example of what is possible in a church building.

The solar installation includes 49 [Aiko panels](#), generating approximately 455W each, alongside a [Fox H3 Pro 20kW three phase hybrid inverter](#) and four [Fox ESS 4.74kWh ECS cube batteries](#). There is a 25-year guarantee on panels, and 10 years for the inverter and batteries. In total, this cost £17,513 and saved the church £3,430 in the first year, giving approximately a five-year payback period. To avoid installing on the steep church roof, the panels were installed on both elevations of the hall roof, with an east/west orientation.



One of the challenges Trinity faced was knowing which installer to work with, due to the number on the market. Trinity got the necessary three quotes from a local installer, the installer who worked with the other church in the area and one known to a church member. For churches considering a solar installation, local contacts and recommendations can be useful. Alternatively, the [MCS certified list](#) can be used, as well as the [Contractor Directory](#), made up of contractors who have worked with churches previously and received positive feedback.

One of Trinity's top tips would be to not delay on a solar installation, as it can save a church money on electricity straight away. A solar installation can also be a good way to engage the church with net zero, as the benefits are clear. They also emphasised the importance of shopping around to get the best export price for excess electricity generated. You can learn more about the Smart Export Guarantee, and which suppliers offer SEG tariffs, [here](#).

The church has also installed an air-to-air heat pump system. They haven't completely removed their gas heating system, enabling them to use it to supplement the heat pump system if needed on the coldest days of the year. An [energy audit](#) has identified that Trinity could install infrared heaters as a supplementary heating method, enabling them to remove gas entirely and therefore saving on standing charges and maintenance costs.

The output units for the system have been tailored to suit the different room sizes and usage. There are two 10kW units in the church, along with two destratification fans to ensure the warm air is kept low and not lost due to the high roofline. Each hall has a further two 10kW units, with smaller 5kW and 3.5kW units in the smaller rooms. These are all zoned to operate independently and can be controlled remotely via an app, with handsets at the church so users can control them if needed. An additional benefit of an air-to-air system is it can be used as



aircon in summer if needed.

In total, the system cost £32,972 and has an estimated payback of 10 years. Trinity acknowledges that net zero works mean a church has to spend money to ultimately save it but feels this is a good use of future local resources, ensuring long term financial sustainability. They would recommend switching to heat pumps but acknowledge that users of the building will need time to adapt to how the new system works, as it's different to gas boilers, so the right settings need to be found to ensure people's comfort.

With an overall cost of approximately £50,000, approximately 75% was funded by the District and Circuit, the Benefact Trust awarded the church a £4,400 grant, and Trinity raised the remainder.

The solar installation was carried out in one day at the end of November 2024. The air-to-air heat pump system was installed in a few days spread over two or three weeks in March/April 2025. Both projects were undertaken by [Cahill Renewables](#), based in Colchester. The church felt there was benefit in using one contractor especially as there was very little difference in total cost compared with the other contractor under consideration.

*With thanks to Stephen Nice for sharing Trinity's story and photos, showing the solar installation and different heat pump output units.*