

Towards Carbon Neutral Churches in Craven: Feasibility Study report

Feasibility study

The study was carried out in 2021 by the consultant engineers Locogen. This project was supported by the BEIS funded Rural Community Energy Fund, managed by the North East Yorkshire and Humber Energy Hub and administered by the Tees Valley Mayor and Combined Authority.

During the study, the engineers undertook a desk-top analysis of energy use and then carried out a site visit to each of the five churches. A very detailed final report has been written, with recommendations for each of the churches, taking into account many discussions with the TCNCC group.

Final report: recommendations

The final report from the consultant engineers, together with a paper which shows the annual cost and emissions summaries for the proposed energy systems for each of the TCNCC churches, can be found [here](#).

The report recommends the following key points:

Burton in Lonsdale:

- The installation of ground-mounted PV panels to generate electricity.
- The use of targeted electric heating via infra-red heating panels within the church.
- the replacement of the fossil fuel (oil) boiler, possibly with a heat pump.

Carleton:

- The installation of ground-mounted PV panels to generate electricity.
- The use of targeted electric heating via infra-red heating panels within the church.
- The replacement of the fossil fuel (oil) boiler, possibly with a heat pump.
- Consideration of an Electric Vehicle (EV) charge point.

Draughton:

- The installation of PV panels to generate electricity.
- The use of targeted electric heating via infra-red heating panels within the church.
- The installation of a heat pump to provide background heating.

Embsay with Eastby:

- The installation of PV panels on the south-facing roof to generate electricity.
- The use of targeted electric heating via infra-red heating panels within the church.
- The replacement of the fossil fuel (gas) boiler, possibly with a heat pump.
- Consideration of Electric Vehicle (EV) charge points in the car park.

Holy Trinity, Skipton:

- The installation of PV panels, either ground-mounted to the rear of the church or hidden on the south transept roof, to generate electricity.
- The use of targeted electric heating via infra-red heating panels within the church.
- The replacement of the fossil fuel (gas) boiler, possibly with a heat pump.
- The use of zoning for appropriate heat distribution for the different spaces in the building.

The report does not recommend the use of battery storage for any of the churches.

Funding

As part of the study, the TCNCC group asked for advice on funding. It is likely that funding for the installation of renewable energy systems will come from a mixture of

- Grant funding
- Match funding from reserves (if available)
- Fundraising.

Recommendations of the TCNCC group

The group has recommended the following to the Church Councils (January 2022):

- Establish a plan for the next 8 years, with staged implementation, to get to net carbon zero by 2030
- Continue to work with other churches for support
- Continue to research options as technologies change.