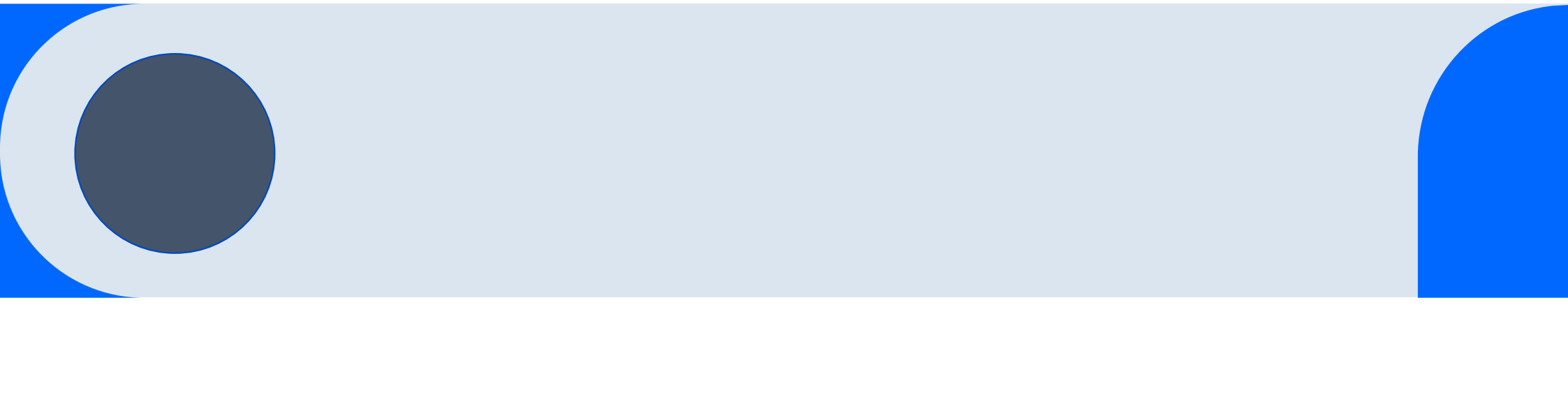


The four C's!

Balancing carbon, conservation, comfort and cash in our churches

Hannah Mann

Environment Programme Manager

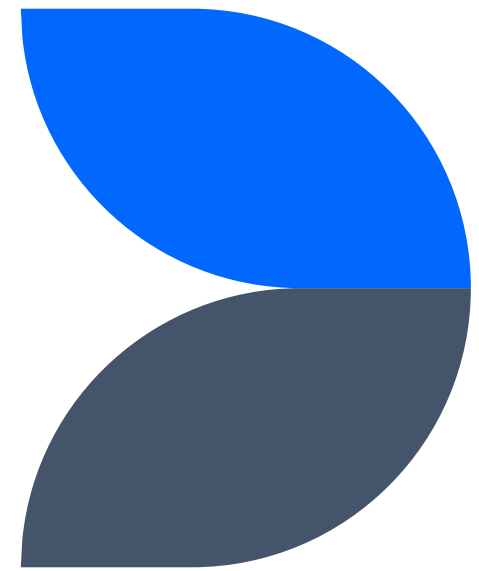


Context

1. Latest carbon emissions results from the Energy Footprint Tool
2. Remember to check your energy bills
3. Faculty rules and energy improvements

‘Fabric first’

Quick-wins to save cash and carbon



Practical Pathway

A. Where do we start?

These are actions that nearly all churches can benefit from, even low occupancy churches used only on a Sunday. They are relatively easy, with relatively fast pay back. They are a good place for churches to start, when trying to move towards 'net zero'.

The building itself:

- A1. Maintain the roof and gutters, to prevent damp entering the building and warm air escaping.
- A2. Fix any broken window panes* and make sure opening windows shut tightly, to reduce heat loss.
- A3. Insulate around heating pipes to direct heat where you want it; this may allow other sources of heat to be reduced in this area.
- A4. If draughts from doors are problematic, draught-proof the gaps* or put up a door-curtain*.
- A5. Consider using rugs/floor-coverings (with breathable backings) and cushions on/around the pews/chairs.

Heating and lighting:

- A6. Switch to 100% renewable electricity, for example through Parish Buying's energy basket, and "green" gas.
- A7. Match heating settings better to usage, so you only run the heating when necessary*.
- A8. If you have water-filled radiators, try turning-off the heating 15 minutes before the service ends; for most churches this allows the heating system to continue to radiate residual warmth*.
- A9. If you have radiators, add a glycol based "anti-freeze" to your radiator system and review your frost setting.
- A10. Replace lightbulbs with LEDs, where simple replacement is possible.
- A11. Replace floodlights with new LED units.
- A12. If you have internet connection, install a HIVE- or NEST-type heating controller, to better control heating.
- A13. If your current appliances fail, then replace with A+++ appliances.

People and policies:

- A14. Complete the Energy Footprint Tool each year, as part of your Parish Return, & communicate the results.
- A15. Create an Energy Champion who monitors bills and encourages people to turn things off when not needed.
- A16. Write an energy efficiency procurement policy; commit to renewable electricity & A+++ rated appliances.
- A17. Consider moving PCC meetings elsewhere during cold months, rather than running the church heating.

Case studies



St Denys, Southampton
Cost = £3K
Annual savings = £5K



St Stephen's, Tonbridge
Saved £2,500 since 2023

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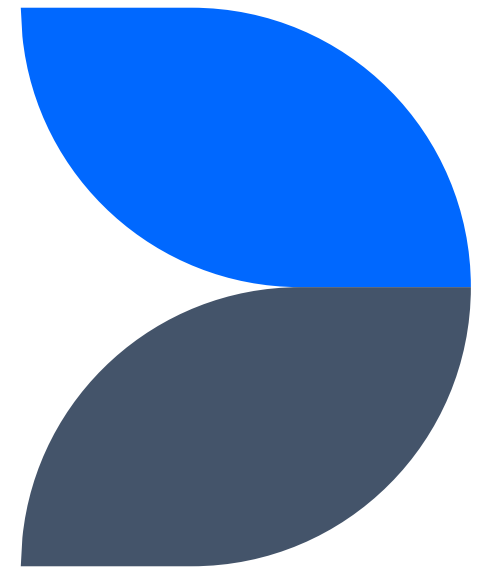
We had to take out a new electricity tariff and our electricity rates were going to go up hugely, so it was an environmental and a financial push – they were the pull factors.

Revd Sera Rumble

”

A warm welcome

Comfort for the congregation



Practical Pathway #2

B. Where do we go next?

These are actions with a reasonably fast pay back for a church with medium energy usage, used a few times a week. Perhaps half of churches should consider them. Most actions cost more than the ones above, and/or require more time and thought. Some require some specialist advice and/or installers. They are often good next steps for those churches with the time and resources to move on further towards 'net zero'.

The building itself:

- B1. If you have an uninsulated, easy-to-access roof void, consult with your QI about insulating the loft*.
- B2. If you have problematic draughts from your door, and a door curtain wouldn't work, consult with your QI about installing a glazed door within your porch, or even a draught-lobby*.
- B3. Consider creating one or more smaller (separately heatable) spaces for smaller events.
- B4. Consider fabric wall-hangings or panels, with an air gap behind, as a barrier between people and cold walls.

Heating and lighting:

- B5. Learn how your building heats/cooling and the link to comfort, by using data loggers (with good guidance).
- B6. Improve your heating zones and controls, so you only warm the areas you are using.
- B7. Install TRVs on radiators in meeting rooms & offices, to allow you to control them individually.

- B8. Consider under-pew electric heaters and/or infra-red radiant panel heaters*, which keep people warm without trying to heat the whole church space. Radiant panels are especially good for specific spaces like chapels and transepts, which you might want warm when you don't need the whole church to be warm.
- B9. If you have radiators, install a magnetic sediment "sludge" filter to extend the life of the system.
- B10. Consider thermal and/or motion sensors to automatically light the church when visitors come in, for security lights, and for kitchens and WCs.
- B11. Install an energy-saving device such as Savawatt on your fridge or other commercial appliances.
- B12. Get your energy supplier to install a smart meter, to better measure the energy you use.

People and policies:

- B13. Vary service times with the seasons, so in winter you meet early afternoon when the building is warmer.

Case studies



All Saints, North Moreton
Under-pew heating



St John's, New Hinksey
Under-pew, electric panel heaters, over-door heater

“

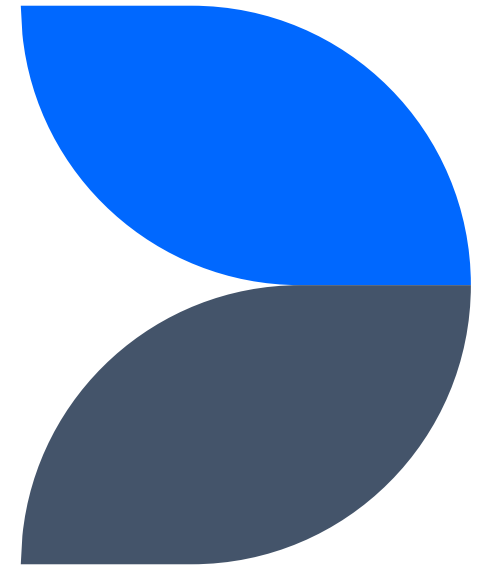
“I could see straight away that the church could be making efficiencies – not necessarily save significant money or energy, but we could be using the energy we do consume much more effectively...Under-pew heating is a game-changer.”

Rob Nickless, Churchwarden

”

Future-proofing

To net zero carbon?



The cost of net zero carbon

- Heat pump technology and associated building upgrades
- Finding the specialists
- Running costs
- Infrastructure



The impact of net zero carbon?

- Resilience against volatile gas prices (see energy crisis 2022)
- Future-proofed for ultimate phasing out of all fossil fuels
- Benefitting from flexible time-of-use tariffs, designed to benefit those using off-peak energy
- Welcoming younger communities into sustainable places



Solar panels? Yes but...

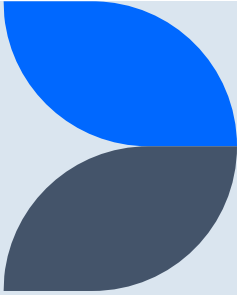
King's College Chapel, Cambridge



What you need to know:

- Current rates mean you sell electricity back to the grid for less than you bought it
- Roof structure and shading need assessing
- Planners still struggling to accept visibility where there is no obvious benefit to the church

What's happening?



1

Pilot projects

2 x national demonstrator churches
10 x diocesan funded churches
National case studies to learn from

2

Funding

National triennium funding
NLHF support for churches

3

Peer support

Networking opportunities to share and learn with other churches
Planned site visits to see tech in action

4

Procurement

New national energy procurement scheme due in 2026 to support low-cost green energy tariffs
Diocesan procurement options being explored

5

Audits

Our audit programme continues, offering bespoke guidance and pathways

Final points

Investment breeds investment

Demonstrate your preparedness and actions – this will attract funders, particularly national church

Phase it, plan now

Don't do it all at once, but do plan and fundraise now – especially if your boiler is 10+ years old

Learn more on 23rd

Hear from experts in their field at our net zero carbon event

CHO

10am-3.30pm

Lunch provided



The mission of Jesus

“...for us who follow Jesus, the overriding reason to care deeply about the earth is that he does..”

Paul Kunert, LICC

Thank you

Hannah Mann

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oxford.anglican.org/net-zero

