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# Renewable Energy Sources

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After two years of planning and fundraising, a major photovoltaic (PV) array on the roof of Bethesda Methodist Church in Cheltenham began generating electricity in 2009. The 32 solar panels will generate over 7,000 kW hours of electricity annually for 25 years.

The church has achieved its third award in the former Eco-congregation scheme. Since receiving the first one from former UK Government Sustainability Advisor Jonathon Porritt in 2003, Bethesda has become a registered Fairtrade church, sold more than £12,000 worth of fairtrade goods, distributed more than 1,000 low energy lightbulbs, run a recycling scheme and supported other environmental groups.

Bethesda has launched its own carbon offset programme. Funds from that have paid for the installation of a solar hot water system at Sukumanwenze AIDS orphanage in Durban, South Africa.

The Eco-congregation assessors who inspected Bethesda for their second award noticed that concern for issues of environmental stewardship and sustainability seemed to permeate all aspects of church life. 'From any perspective,' they said, 'the Bethesda environmental programme is first class. It should, in our view, receive maximum publicity. Other churches – and indeed secular organisations – should be encouraged to visit and learn from their example.'

do



Renewable energy is clean, produces few waste products, and comes from sources – like the sun or wind – that won't run out.

This is in contrast to sources of energy such as oil, gas or coal.

Small-scale renewable energy is becoming more common in the home, particularly solar panels (thermal for heating water or photovoltaic for generating electricity), heat pumps, wind turbines and biomass.

If you're thinking of investing in one of these technologies for your home or community, it's worth finding out how each of them works, what they do and their associated costs.

do more



## Research renewables for historic buildings

For guidance on improving energy efficiency or domestic scale renewable energy of historic buildings, a helpful advice document has been published by Bath and North East Somerset Council.

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### RENEWABLE ENERGY

[www.cse.org.uk/advice/renewable-energy](http://www.cse.org.uk/advice/renewable-energy)

### ENERGY EFFICIENCY & RENEWABLE ENERGY GUIDANCE FOR LISTED BUILDINGS AND UNDESIGNATED HISTORIC BUILDINGS

[www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/Sustainable-and-Retrofitting/listed\\_building\\_guidance\\_-\\_energy.pdf](http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/Sustainable-and-Retrofitting/listed_building_guidance_-_energy.pdf)



## See how churches switch their systems

Across the Church of England there are many examples of parishes shrinking their footprint. There is an online list of church buildings with renewable energy systems. Here are just some of the case studies shared:

- St Bridget, Chelvey, Somerset, Bath and Wells – a grade 1 listed church that has installed solar panels reducing CO2 emissions.
- Church of the Good Shepherd, Tatham Fells, Blackburn – installed a biomass boiler. This has reduced their CO2 emissions and keeps the church warm, encouraging attendance.
- St John's, Bigrigg, Carlisle – the installation of a ground source heat pump has led to financial savings for the church.
- St Paul's, Gulworthy, Exeter – this grade II listed church replaced worn-out storage heaters and portable radiant heaters with a new radiator system and 50 kW wood pellet boiler in a free-standing 'pod' against the church.
- St Bartholomew's House, Ogwell, Exeter – the Diocese of Exeter installed an air source heat pump and wet central heating system in clergy housing at St Bartholomew's House.

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### RENEWABLE ENERGY CASE STUDIES

[www.churchcare.co.uk/shrinking-the-footprint/projects-and-case-studies](http://www.churchcare.co.uk/shrinking-the-footprint/projects-and-case-studies)



## Learn from other churches' experiences

A church in Lincolnshire that had solar panels fitted to its roof more than two years ago has been producing enough electricity to cover its annual bill. According to a report on the BBC website, St Denys' in Sleaford invested £70,000 on 54 panels in 2008, inspired by an article about green energy in the Church Times. It has since received many enquires about the project from other churches and organisations.

## Check out biomass boilers for heating

A 900-year-old house of worship has undergone a thorough green renovation to become Britain's first zero carbon church. Featuring a biomass boiler for heat, and a solar array on the roof, solar panel suppliers Kyocera claim that St Michael and All Angels Church, Withington, is now running on 100 per cent renewable energy.

## Explore solar power for your church

A church built to celebrate the British victory at the Battle of Waterloo is now generating its own power. According to Grubb Street Media, St Andrew's Church at Netherton, near Dudley, has marked its place in history once again when it became the first in the Diocese of Worcester to install solar panels.

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**ST DENYS' IN SLEAFORD**  
[www.bbc.co.uk/news/uk-england-lincolnshire-15404426](http://www.bbc.co.uk/news/uk-england-lincolnshire-15404426)

**ST MICHAEL AND ALL ANGELS  
CHURCH, WITHINGTON**  
[www.treehugger.com/renewable-energy/900-year-old-church-goes-100-renewable.html](http://www.treehugger.com/renewable-energy/900-year-old-church-goes-100-renewable.html)

**ST ANDREW'S CHURCH AT  
NETHERTON**  
[www.grubbstreetmedia.co.uk/news/view/church-with-link-to-titanic-goes-green](http://www.grubbstreetmedia.co.uk/news/view/church-with-link-to-titanic-goes-green)



## Discover how historic churches make use of renewables

This subject is examined in the special report Sustainable Energy Options For Older Churches And Chapels In Wales.

## Explore alternative ways of heating your worship space

Northamptonshire parishioners were warm and happy after their church installed unusual panel-style heaters. The product from a Kettering-based company warmed people – not pews – at St Mary the Virgin Church. Cooltouch heaters comfort worshippers by directing 'far-infrared' heat from a thin panel heater mounted directly in front of them. A fabric screen prevents any contact with its radiant surface. There are also other heating products where the surface remains cool to the touch.

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### SUSTAINABLE ENERGY OPTIONS

[www.regions202020.eu/cms/assets/Uploads/Churches-and-Chapels-Energy-Guide2.pdf](http://www.regions202020.eu/cms/assets/Uploads/Churches-and-Chapels-Energy-Guide2.pdf)

### COOL TOUCH HEATERS

[cooltouchheaters.co.uk/testimonials.html](http://cooltouchheaters.co.uk/testimonials.html)