DAC NZC Heating Policy

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## Replacement of a heating system and NZC considerations

This note has been prepared by the Ely Diocesan Church Buildings and Net Zero teams, to outline the process and the documentation which is required to accompany heating system, including boiler replacement, faculty applications. These may be:

* Urgent replacement (of failed systems)
* Planned replacements (inefficient/old/end of life systems)
* Significant modifications or extensions to the system associated with a reordering

Functioning heating systems which are not nearing end of life should not be replaced due the carbon already invested in the manufacture and installation of the existing system ("embodied carbon"). To find out if your boiler is nearing end of life, please check the manufacturer’s information (a boiler is usually nearing end of life after around 10-15 years, but this varies).

[The Faculty Jurisdiction (Amendment) Rules 2022](https://www.legislation.gov.uk/uksi/2022/155/made?msclkid=289c68eac6eb11ec84ca482ee8242eba) were issued to support the Church of England's General Synod resolution for all parts of the church to work to become carbon 'net zero' by 2030. The legislation requires that applicants provide, “in the case of matters to which net zero guidance applies, an explanation of how the petitioner, in formulating the proposals, has had due regard to that guidance”. The DAC then has to comment to the Chancellor on whether it considers due regard has taken place. The Church Buildings Council heating guidance documents can be found [here](https://www.churchofengland.org/resources/churchcare/advice-and-guidance-church-buildings/heating) and they advise against the installation, or like-for-like replacement of, fossil fuel systems.

Remember, to have ‘due regard’ means you must show that you have followed the guidance unless you can prove your situation is one that is not covered by the guidance.

The Diocese of Oxford’s [heating flowchart](https://d3hgrlq6yacptf.cloudfront.net/61f2fd86f0ee5/content/pages/documents/20240228-doc-parish-support-church-buildings-heating-heatingdecisionflowchart.pdf) outlines the likely solutions for churches, but every church is different and advice should be sought, particularly where the church is a listed building.

### Permissions

| **Proposal** | **Permission** | **Who grants permission** |
| --- | --- | --- |
| Repair of existing boiler (electric or fossil fuel) | List A1.6a – does not require any permission as long as the specified conditions are met | n/a |
| Replacement of a non-fossil fuel boiler | List A1.7a - does not require any permission as long as the specified conditions are met. | n/a |
| Replacement of a fossil fuel boiler with non-fossil fuel boiler | Requires List B1.5 permission not a faculty, as long as the specified conditions are met. | Archdeacon with Church Buildings Team advice |
| Temporary heating | Requires List B4.10 permission not a faculty, as long as the specified conditions are met. | Archdeacon with Church Buildings Team advice |
| Replacement or installation of fossil fuel boiler | Faculty permission | Chancellor with DAC advice for Faculty |
| Replacement of non-fossil fuel heat emitter | If the replacement is similar to the emitter being replaced this can be undertaken under List A with no further approval required.  If the emitter looks different the church building team should be consulted to determine whether a List B or Faculty approval may be required. | PCC self-approved for List A, Archdeacon with Church Buildings Team advice for List B and Chancellor with DAC advice for Faculty |
| Pew heaters including under-pew heaters, heated pew cushions and panels mounted on the back of pews | List B4.10A allows the installation of an electrical heating system for attachment to pews made in or after 1850 and which are not of historic interest, otherwise a Faculty will be required. The church building team should be consulted. | Archdeacon with Church Buildings Team advice for List B and Chancellor with DAC advice for Faculty |

### Stage 1 - First response to a heating system failure

PCCs should contact the DAC as early as possible to discuss their case.

Where an existing heating system has failed, to afford time to identify and fundraise for the most suitable replacement heating system:

* PCCs should investigate options for keeping the current boiler going (e.g. holding repair, re-use parts)
* Where a holding repair isn’t possible, PCCs should investigate using a temporary solution to provide heating until a lower carbon permanent system can be installed. Please refer to the CBC [Temporary Heating Options](https://www.churchofengland.org/sites/default/files/2023-05/Heating_temporary_options.pdf) guidance for further information and contact the DAC for the required permissions.
* The DAC has no intention that any church should be left unheated during this process

### Stage 2 - Needs assessment

To enable effective discussions, PCCs should:

* review the Church Buildings Council [heating guidance documents](https://www.churchofengland.org/resources/churchcare/advice-and-guidance-church-buildings/heating), including:
  + [Heating Principles](https://www.churchofengland.org/sites/default/files/2023-05/Heating_principles.pdf),
  + [Heating Checklist](https://www.churchofengland.org/sites/default/files/2023-05/Heating_checklist.pdf)
  + [[Heating Options Appraisal](https://www.churchofengland.org/media/24963)](https://www.churchofengland.org/sites/default/files/2023-05/heating_options-appraisal.pdf)
* book an energy audit, if the church is in the top 20% emitters (NZC officer to advise) – see ‘Further Resources’ below
* raise the matter with its QI architect

The DAC, following [national advice](https://www.churchofengland.org/resources/churchcare/advice-and-guidance-church-buildings/hydrogen-and-hydrotreated-vegetable-oils), does not consider claims of “hydrogen-ready” to be worthwhile and will therefore not consider cases which are based upon this.

PCCs should clearly identify the usage pattern of the (see ‘Further Resources’ below for a link to a [Church usage spreadsheet](https://elydiocese.org/content/pages/documents/church-usage-reporting.xlsx) which can be used for this purpose).. This should be based upon the current usage pattern for a *usual* winter week. If a business plan exists for developed usage in the future, this is to be provided separately. Any business plan should include appropriate market research evidence. The PCC should also define any additional needs (including improved heating controls) and financial resources.

PCCs should evaluate the adequacy of the failed heating system – was it effective, in what ways did it not meet their requirements/expectations.

Initial enquiries into utilities should be made at this stage, to establish the feasibility of options

**Once completed, the Heating Checklist and Heating Options Appraisal and the results of other inquiries should be forwarded to the DAC.**

*If required, NZC Officer to visit/communicate with the church to discuss the NZC Routemap for churches, EFT data and possible options for low carbon/hybrid heating solutions.*

### Stage 3 – Design phase

The PCC will want to consult experts, to provide several alternative heating solutions, either with support from an M&E consultant and/or heating suppliers and installers. Much of this section is technical and we encourage PCCs to delegate the details to their professional advisers. Options being considered should include at least one non-fossil fuel/hybrid option (see ‘Further Resources’ below). We would recommend that the following information be collated by your appointed expert for the PCC to review and compare, for all options being considered:

* estimated energy consumption/year (kWh) based upon normal week (space heating options to include estimated warm-up hours)
* estimated annual maintenance costs
* capital cost (exc. UKPN cost for any electricity supply upgrade)
* estimated running cost
* estimated CO2e emissions
* UKPN cost (if applicable)
* anticipated thermal comfort achieved by options
* Some consideration of embodied carbon in the different options

*If considered necessary by the DAC case officer, DAC heating advisor to visit church to review heating options. DAC heating advisor will need:*

* Energy Footprint Tool data (the NZC Officer can assist with this if required)
* Heating checklist
* detailed usage pattern of the building (see ‘Further Resources’ below)
* detailed heating settings for building (e.g. for how many hours and on what days do you run heating)

### Stage 4 – Faculty application

**All** applications need to include the following information which represent your heating ‘Statement of Need’:

* details of existing boiler, to include fuel type, age, output in kWh, location within church and flue arrangement with general and detailed photos.
* details of existing heat emitters (e.g. radiators, under-floor, panels), to include age and locations within church including a church plan and photos
* report from boiler engineer on condition and viability of repair
* detailed usage pattern of the building (e.g. days/times/duration of services/events – see ‘Further Resources’ below)
* detailed heating settings for building (e.g. at what targeted temperature, for how many hours and on what days do you run heating)
* photos of church interior, showing existing seating arrangements
* details of any conservation considerations (specifically any items which have heating or humidity requirements)
* details of any utility upgrade work associated with the proposed heating system

Applications where a fossil-fuel based system is being proposed will also need to provide the following information, even in an emergency:

* a completed Practical Path to Net Zero checklist
* an energy audit report
* a Heat Decarbonisation Plan (HDP). An HDP plans the church’s heating transition towards eventual full electrification and should include a Heating Resilience Plan
* the completed heating checklist
* a Heating Options Appraisal, demonstrating all options considered (including at least one non-fossil fuel option) and their financial viability (including comparative capital and running costs and carbon emissions), as explained in the Church of England guidance [here](https://www.churchofengland.org/sites/default/files/2023-05/heating_options-appraisal.pdf)
* plans to reduce current energy consumption, such as introducing smart heating controls, to be implemented at the time of boiler replacement
* a copy of the most recent Energy Footprint Tool (EFT) report and a commitment to complete it every year
* an explanation of the reasons for not following the net zero guidance, with evidence to support these (e.g. UKPN costs, NZC heating option costs)
* evidence of at least one grant application submitted to help fund Net Zero heating solution
* NZC Action Plan (including any immediate mitigating actions such as improving controls for heating system and other plans to reduce energy consumption)
* share plans for improving thermal comfort through pew/chair covers, floor coverings, wall coverings (and so reducing heating demand)
* An action plan to engage with Eco Church or something similar

*Please note, we do not recommend using a green gas tariff. We recommend that the associated savings of not purchasing green gas should be ringfenced to help finance future Net Zero/ decarbonisation work.*

*(n.b. the Church Buildings Team case officer will be able to provide advice)*

**Should the parish not be able to supply this information, the DAC, or its officers, will assume that ‘due regard’ has not been paid.**

### Stage 5 - DAC NZC subcommittee case evaluation

The DAC NZC Subcommittee reports to the full DAC in respect of whether cases have shown adequate ‘due regard’ to the Church of England Net Zero guidance for Faculty applications. The subcommittee will consider the need for further documentation/ evidence to support the case, which might include:

* Technical information of proposed materials or products, with suitable explanation and/or justification for their usage
* Obtaining a ‘Net Zero’ or low carbon alternative to compare with the existing proposal
* Monitoring of the church internal/external temperature/relative humidity
* Advice to the applicant by one of the DAC specialist advisors

### Stage 6 - DAC case evaluation

The Case Officer determines whether the case is considered Net Zero Carbon or not. If the parish is unable to provide any of the required information, they should notify the case officer accordingly, advising of any mitigating circumstances.

The case officer, Diocesan Environment Officer, Net Zero Carbon Officer and Net Zero Carbon Subcommittee will work together with DAC specialist advisors to support and evaluate applications.

The case officer for each application will determine whether the case is ready to come to a DAC meeting. At the DAC meeting, cases will be reviewed and where possible a decision reached, however heating cases are likely to appear at more than one DAC meeting as the case is developed and reviewed.

### Further resources:

Further heating guidance:

* Diocese of Ely - [Church Heating](https://elydiocese.org/church-in-action/environment-and-sustainability/net-zero-carbon/nzc-parishes/church-heating) webpage
* Diocese of Oxford [heating guidance](https://www.oxford.anglican.org/parish-support/church-buildings/permissions-and-how-to-apply/heating) – this page provides a list of suppliers for electrical heating options
* [Church usage spreadsheet](https://elydiocese.sharepoint.com/:x:/s/ChurchBuildingsPastoralDept/EdWkeClifXxPpvdB3x7XF7gBhI1eo4ITSobWKjoM4BUd_w)

Fundraising guidance:

* Diocese of Ely – [Supporting Giving](https://elydiocese.org/parish-support/parish-giving/) webpage
* [Parish Resources](https://www.parishresources.org.uk/resources-for-treasurers/funding/) guide
* [Community Energy England's](https://communityenergyengland.org/pages/funding-opportunities-2) funding list
* Church of England NZC [webinars](https://www.churchofengland.org/about/environment-and-climate-change/webinars-getting-net-zero-carbon)