



DAC GUIDANCE ON PHOTOVOLTAIC SOLAR PANELS

CRITERIA

Below are the Diocesan Advisory Committee (DAC) guidelines for the installation of photovoltaic cells that any parish seeking to install photovoltaic cells must meet. If your parish does not meet these criteria please contact the DAC secretary for advice. Meeting all of the criteria is not a guarantee of approval, although carefully following this guidance and submitting all the documents requested will make the task of assessing your application more straightforward and more likely to receive a prompt response.

The use of slate coloured panels on listed church buildings with traditional local slate roofs is unlikely to be acceptable.

Preparation

- a. Parishes should provide the DAC with statements of need and significance.
- b. Parishes should prove to the DAC that the proposed installation is part of a wider package of measures they have already taken towards better environmental stewardship. Ideally parishes should be following the Churches in Cornwall Environmental Awards scheme.
- c. Contractors should provide a feasibility document identifying the expected solar efficiency of the installation (%), annual energy production, monetary and carbon payback periods.
- d. The comment of the Quinquennial Inspector is vital, and wherever possible he/she should be closely involved in the proposals. The DAC will expect to see written confirmation from your Quinquennial Inspector that he/she has been consulted and any comments they wish to make on the proposals.
- e. The site should have been assessed for suitability, including assessing trees that may shade panels, and the impact of a west end tower. The contractor's report on suitability must be submitted with your application.

The site and recommended practice

- a. The proposed installation site should ideally not be visible from the ground.
- b. The roof structure and covering and the ceiling should be assessed by your Quinquennial Inspector or a Structural Engineer to ensure that it can carry the additional weight of the equipment.
- c. The fixings and equipment should not adversely affect the aesthetic integrity or historical significance of the building, and the normal DAC criteria on visual significance internally and externally apply, therefore:
 - Discreet and secure space should be identified for the inverter equipment
 - All wiring is subject to normal DAC wiring conditions
 - The fixing of the panels must be reversible, and must not compromise the roof covering (for example by piercing or restricting thermal movement)

The DAC has noted an increasing trend towards 'clutter' at the west end of churches. As this is often where the electrical intakes are located PCCs should consider installing

a well-designed screen to reduce the visual impact of the installation of the inverter equipment. If such a screen is being proposed it should form part of the application for recommendation for a faculty for the PV installation.

d. plans must include marked up photographs of the roof showing location of panels, and sectional drawings detailing through the roof to show the fixings. This should include plans for adequately weathering the panel fixings.

e. The roof must be assessed for remaining life and not be expected to need major work within the expected lifetime of the panels. If that is not the case the roof is unsuitable for panels until the necessary remedial work has been undertaken.

f. There must be a plan for safe access to the roof for maintenance and cleaning of the panels.

The panels and performance

a. Panels should have a minimum 25 year performance guarantee

b. Should be inspected annually by a suitably qualified engineer, together with the wiring and inverter equipment. This should include an assessment of individual panel status using panel string voltage comparisons to detect deteriorating panel output.

c. Single panel change out should be relatively simple.

d. The trade-off between fewer more efficient panels against additional expense should be explored and minuted at a PCC meeting prior to making a faculty application.

e. there must be plan of how the panels will be removed and disposed of at the end of their useful life (the installer should be able to provide this). This should be expressed in today's cost.

g. the submission must include a strategy for dealing with failure or obsolescence of panels or the entire array within the expected life of the panels. Updating or upgrading the array will require a new faculty application. In these circumstances consideration should be given to re-using the fixings to minimise damage to the roof.

h. there must be a plan to allow for the temporary removal of panels to replace slipped or damaged roof slates.

Consultation

a. Parishes should consult those bodies listed on the Application for Recommendation for a Faculty form.

b. A letter of consent from the insurers is essential

c. A planning screening letter should be sought and submitted with the DAC faculty application.

Post-installation and monitoring

a. After the first twelve months an evaluation report is to be produced detailing the levels of energy produced across the year, FiT earnings, and remaining energy bills.

b. Monitoring should continue throughout the lifetime of the installation, and a summary of that monitoring be provided to the inspecting architect for inclusion in QI reports

CHECKLIST

This document should be read in conjunction with the Criteria contained in the DAC Guidance note on Photovoltaic Solar Panels.

Please include this sheet with your request for recommendation for a faculty

Tick to confirm the following documents are included in your application:

- Statement of need
- Statement of significance
- A completed copy of the National Energy Audit sheet
- Written comment from your Quinquennial Inspector on the proposals
- Copy of the contractor's report on the suitability of the site.
- Plan of proposed location of panels, including marked up photographs to show location.
- Confirmation that the Quinquennial Inspector or Structural Engineer that the roof will bear the weight of the equipment.
- The specification of the panels, including expected useful life.
- Details of the panel fixings including sectional detailing plans through the roof
- Details of proposed location for the inverter including plan and photographs
- An exit plan, showing how the panels will be removed and disposed of at the end of their useful life.
- A failure strategy for dealing with failure or obsolescence of panels or the entire array within the expected life of the panels.
- A letter of consent from the parish's insurers
- Evidence that the local planning office has been consulted, ideally by submitting a copy of the planning screening letter.

If any of the above are not being provided please use the space overleaf to set out why you have not included them.