

A Short Guide to Solar Photovoltaic Systems

October 2025

WHY CHOOSE a PV system

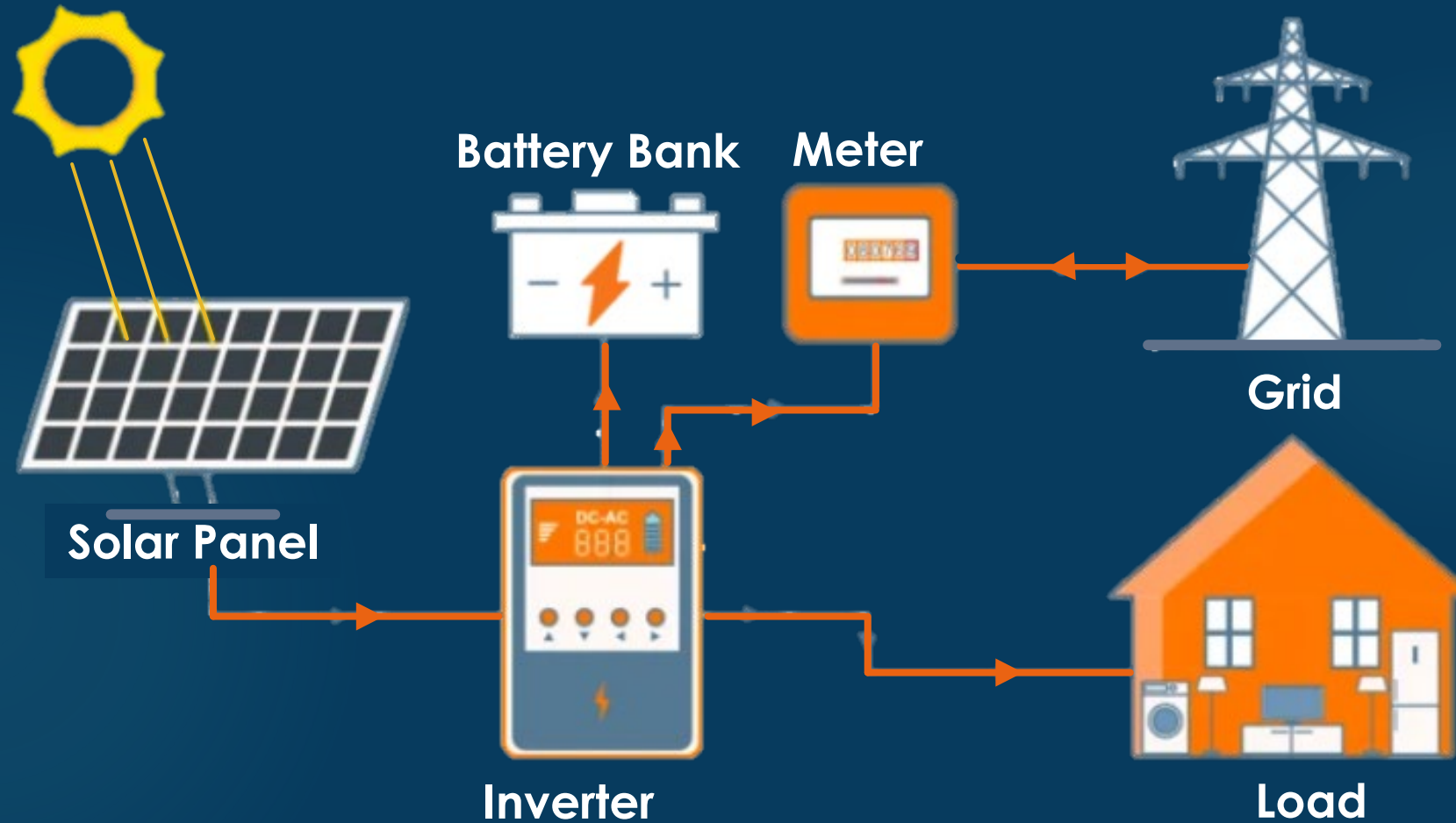


Environmental benefits

- Financial benefits in the long run
- Modelling behaviour for the community
- Reduced operating expenses
- Energy independence
- Reduced exposure to energy price hikes

COMPONENTS of a PV system

TITAN ECO

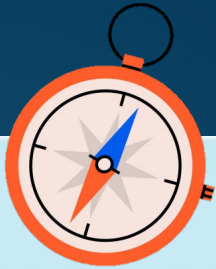


CONSIDERATIONS

Will it work for us?

TITANECO

- Roof space
- Orientation
- Shading
- Aesthetics
- Level of electricity consumption



BATTERY STORAGE

How it works

- At what time is the Church building in use and when is energy consumed?
- Ability to get on an off-peak or time-of-use electricity tariff
- Cost
- Quicker payback period - SEG



FINANCING a PV system



- Sources
 - Church of England, Borough Councils, Government Grants, Charities and Interest Groups and your own communities!
- Payback period
- How long it will last
- Most economical systems v. most expensive

Funding Opportunities for Churches & Charities

SURREY

We know going **green** is the right thing to do for our planet and our communities to ensure a sustainable future. We also know that it can be an expensive transition to fund.

With help from some of our past clients, we have compiled a list of funding sources for clean energy projects. Please explore the links below and we wish you the best of luck on your green journey!

Church of England:

Having launched its [Net Zero Carbon Programme](#) with a goal of NZ by 2030, the CoE is now funding preparatory projects through [Stage 1 funding to Demonstrator Churches](#). To be considered, contact your Diocesan Advisory Committee.

Cornerstone:

Discover how this online generosity tool can help change the trajectory of church finances.

Borough Councils:

Councils offer various opportunities for funding community projects. Contact your local council for information. In Guildford, for example, opportunities include [Aspire Community Grants](#) and [Guildford Community Lottery](#).

Government grant schemes:

Currently the [Government's Listed Places of Worship Grant Scheme](#) has been extended for 2025/26 through the [Department of Culture, Media and Sport](#).

www.titaneco.co.uk



Aviva Community Fund:

Seeks to promote healthy, thriving communities by preventing, preparing for and protecting against the impacts of climate change.

Community Foundation for Surrey:

A philanthropic charity that connects local donors with causes that matter in Surrey.

Crowdfunding:

Another great way of raising funds is through starting a project that the local community can support, with services such as [Space Hive](#) enabling easy donations.

Big Give:

An organisation supporting charities by offering training and matching the money you raise through their [Big Give campaigns](#).

Marshall's Charity:

This Charity offers grants to churches and will consider environmental projects and restoration grants from £3-25,000.

Get Grants:

Provides practical support, information and training that fundraisers with all levels of experience can take away and put into practice.

Energy Saving Trust:

The [Energy Industry Voluntary Redress Scheme](#) offers funds to deliver energy-related projects that meet the scheme priorities and benefit people across the UK.

Surrey County Council:

This site offers information about further schemes and grant programmes including the Grants for Good, the National Grid Community Grant Programme and more.

Centrica:

Energy for Tomorrow is helping communities reach net zero through grant funding and expert advice and are accepting applications from the East and Southeast.

Community Energy England:

This advocacy group are working at the heart of energy transformation and offer excellent guidance and resources, including on their [funding opportunities](#) page.

www.titaneco.co.uk

FINANCING a PV system



- Sources
 - Church of England, Borough Councils, Government Grants, Charities and Interest Groups and your own communities!
- Payback period
 - 7-8 years is average
- How long it will last
 - Standard warranty for most inverters and batteries is 10 years
 - Panels are warrantied for 25-30 years
- Most economical systems v. most expensive
 - Will reflect quality, size and ease of user experience (monitoring)

PERMISSIONS for a PV system



- DNO
 - Application prior to installation required for installs larger than 3.68kWp
 - Approvals dependent on local grid infrastructure to ensure grid stability
 - DNO can impose an installation or export limitation
 - A full assessment can take up to 6 weeks
- Planning permission
 - Planning permission is required for solar panels if they will protrude more than 20 cm from the roof, exceed the highest point of the roof (excluding the chimney), or if the installation is on a listed building or in a conservation area where it's visible from the highway.
 - Details can be found in:
The Town and Country Planning (General Permitted Development) (England) Order 2015, Cross Heading: **Class J – installation or alteration, etc., of solar equipment on non-domestic premises.**
[The Town and Country Planning \(General Permitted Development\) \(England\) Order 2015](#)

PERMISSIONS for a PV system



- Planning Permission (*cont.*)
 - Planning permission is required for installations in/on:
 - Conservation Areas
 - Designated Wildlife Sites
 - Monuments
 - Listed Buildings
- Historic England
 - *** ECCLESIASTICAL EXEMPTION may apply to PV installations on listed places of worship
<https://historicengland.org.uk/advice/caring-for-heritage/places-of-worship/>
 - Seek guidance from your local authority Conservation Officer
 - More information: <https://historicengland.org.uk/advice/planning/consents/lbc/>
- Church Leadership

Bird proofing

Protect an array from nesting birds and other wildlife gaining access to the void under panels, causing:

- damage
- noise nuisance
- mess
- damage to the cabling





Premium bird proofing
British manufactured

- Protect against wildlife nesting and mess
- Diminish wind lift and noise
- Lend an aesthetically pleasing finish to an array, disguising the gap and mounting structure under solar panels



SolaSkirt has also been used successfully in other church projects, such as at All Saints Church, Bedworth, installed by Optimum Electrics. Here it was used to “hide the railings and underside of the panels, ensuring a neat and unobtrusive installation” to meet planning requirements. Read the full case study here:
<https://www.optimumelectrics.co.uk/post/landmark-solar-system-installation-at-all-saints-church-bedford>



Some of our FAVOURITE projects



St. John's

Stoke, Guildford

Grade II* Listed

As part of a wider vision to make its buildings “fit for purpose for the next chapter”, St John's Church installed solar to reduce its environmental impact and achieve long-term energy savings.

Given the heritage, character and Grade II* listed status of the building, the system needed to balance performance with visual sensitivity - and so was carefully designed to integrate with its surroundings.



St. John's Stoke

TITANECO





“The addition of SolaSkirt to make the panels blend into the roofline and look smart was crucial when considering our Grade II* listed building... We liked SolaSkirt for the neatness and finished look it gives the panels... and I’m sure the skirt helped get it over the line with permissions with both the DAC and council heritage advisor.”

- David Curran, Project Lead,
The Next Chapter, St. John’s Church



Some of our FAVOURITE projects



St. George's

Ashted

Built in 1882

“*St. Georges Church, with its rich heritage, now embraces a future-oriented approach... The 57kWp solar array not only reduces the church's environmental impact but also serves as a symbol of responsible energy use within the community, bridging the gap between tradition and innovation.*



We're keen to respond to the Church of England's challenge for our buildings to be 'net zero' by 2030. The solar panels project was our most ambitious so far [...] The panels look great on our roof, and the whole system is running very smoothly. In 2024 we hope to save 9.4 tonnes of CO2 and repeat this for many years to come.”

- **Liz Marlow** - Chair of the Church's Caring for Creation Committee

St. George's Ashtead

TITANECO



Some of our FAVOURITE projects



Bourne Hall

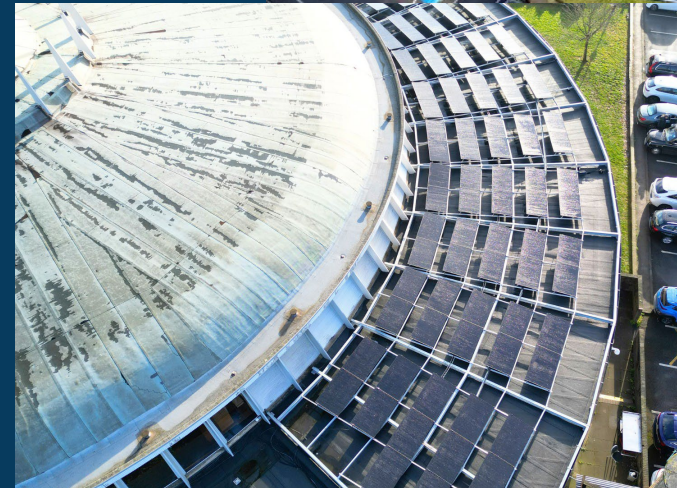
Ewell

Grade II listed, built in 1970

Bourne Hall is a community centre and event space that houses Ewell Library, a free Museum, café and communal spaces.

“ Bourne Hall is an important hub for our community, and the installation of solar panels and the development of a robust heat decarbonisation plan is just part of a series of works that will make this picturesque and historical landmark more sustainable for future generations and help continue Epsom & Ewell Borough Council’s drive to be carbon neutral by 2035.”

- LIZ FROST, Chair of the Epsom & Ewell Borough Council Environment Committee



Lisa Kanter

lisa@titaneco.co.uk

07749116763 - 0333 444 2136