

# Installing Solar Panels to address Climate Change

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The Uniting Church in Australia, both through the meetings of the National Assembly and through the Synod meetings, has committed to reducing its greenhouse gas emissions in response to climate change. The Uniting Church is committed to playing its part in curbing the harmful impacts of climate change. One option that can be pursued is the installation of solar panels on church properties. Individual congregation members might also consider installing solar panels in their homes.

Installing a solar PV system will allow you to generate renewable energy and reduce your electricity bills. Some of the electricity you generate will be used in your home to power electrical appliances and, depending on your particular solar plan and electricity usage patterns, some may be exported back to the electricity grid.

## Online information on installing solar panels

- Sustainability Victoria has a very detailed and helpful website on installing solar panels: <https://www.sustainability.vic.gov.au/You-and-your-home/Save-energy/Solar-power/Install-solar-power>
- Solar Victoria also has detailed resources on arranging the installation of solar panels: <https://www.solar.vic.gov.au/solar-panel-pv/section-7-finding-right-installer-and-steps-installation>
- The Tasmanian Government has produced resources to assist with arranging the installation of solar panels: <https://www.cbos.tas.gov.au/topics/housing/building-renovating/installing-solar-panels-in-your-home>

## Considerations for installing solar panels

Some issues to consider when considering the installation of solar panels are:

- Congregations considering installing solar panels must determine if the property is subject to a Heritage Overlay as a planning permit will likely apply.
- The roof structure of a Church or missional building must be assessed for structural suitability prior to engaging a solar panel installation. Other considerations need to include the roof and roof frame material, batten / purlin material thickness and spacing, waterproofing (penetration versus no penetration) and edge zone for safe maintenance access. Therefore such supply and installation should only be carried out by accredited installers and the building assessed by a registered practitioner.
- The supplier of the solar system must provide a structural certificate by an Australian registered practitioner. These certificates demonstrate that the mounting system will help prevent damage to a solar installation and help safeguard the roof in the event of a wind-induced failure. The system must be accredited to the latest wind code, Australian Standard AS1170.2. Some wind-induced failures can be due to panels being installed too close to the edge or ridge of the roof. Like buildings, solar framing needs to be designed for major storm events.
- Accredited installers are required to advise on maintenance. The maintenance must also comply with the current standards due to impacts as a result of weathering, damage or an upgrading of the standards themselves. Cost of maintaining the solar system is a consideration in the budgetary planning for the project, but is likely to be wholly or partly paid for through cost saving from the electricity generated by the solar panels.

Seek professional advice to the specification, accreditation, maintenance and warranty of solar panel installation. There are disreputable solar system installers, so it pays to make sure the supplier and installer of the solar system has a reliable business history.

**All contractors and consultants must be pre-qualified and have completed the UCA Contractor / Consultant Online Safety induction. To pre-qualify and induct your contractor or consultant, email their company details (including and email address) to [synodohs@victas.uca.org.au](mailto:synodohs@victas.uca.org.au)**

**For further support from The Uniting Church in Australia Property Services team, please call 9116 1956 or email [property@victas.uca.org.au](mailto:property@victas.uca.org.au)**

## Modern Slavery and Solar Panels

The Synod is committed to taking all reasonable steps to try and ensure the products that any of its entities purchases is free of presence of modern slavery in the production of the goods in question. Unfortunately, there is credible evidence of forced labour being used in the production of solar equipment that is manufactured in China. There is also evidence of exploitation of people in the mining of rare minerals in Africa that are used in battery systems that can back up a solar system. The Synod Justice and International Mission Cluster and its supporter network are advocating to the Australian Government and businesses to take actions to eliminate modern slavery and exploitation from the production of all goods and services imported into Australia and manufactured in Australia.

The need to take action on climate change means that congregations and households should still proceed with the installation of solar panels and battery storage where they are able to do so. At the same time, the Synod Justice and International Mission Cluster would urge that reasonable efforts are made to reduce the risks of modern slavery in the solar equipment that is purchased. At the time of writing, the most that can be done is to try and avoid purchasing solar equipment produced in China or containing components and raw materials that are produced in China. It may be impossible to find solar equipment that does not contain any components that have been produced in China. For example, 95% of solar modules rely on solar-grade polysilicon. China supplies 75% of the world's polysilicon. Unfortunately, solar equipment produced outside of China, in Australia, Canada, USA or Europe, is usually more expensive than the Chinese equipment.

The Chinese produced solar equipment and components present a particularly difficult problem in trying to identify those that have the highest risks of forced labour in their production. The reason for the difficulty is that the Chinese government sanctions and facilitates the use of the forced labour. The Chinese government also conceals the prevalence of forced labour and requires businesses operating in China to assist in the concealment of the use of forced labour.

The Chinese regime has been subjecting millions of indigenous Uyghur and Kazakh people to forced labour throughout the country.

Solar retailers find it difficult to identify if the solar equipment they are selling is free of Chinese components and raw materials, even when they are committed to doing so.

There are reports of Chinese solar equipment suppliers seeking to conceal the presence of forced labour in certain products by falsifying labels on equipment packaging and falsifying supply chain information to fool tracing software.

It has been suggested that purchasing products using Wacker or REC polysilicon or from US company First Solar that use a particular technology that does not use polysilicon will reduce the risks of modern slavery in the production of the solar equipment you are purchasing. When purchasing solar modules, it is possible to ask the retailer to identify the source of polysilicon so that you can better determine risk of forced labour.

For details of presence of forced labour in the Chinese solar equipment production, you can read Laura T. Murphy and Nyrola Elimä, 'In Broad Daylight. Uyghur Forced Labour and Global Solar Supply Chains', Sheffield Hallam University, Helena Kennedy Centre for International Justice, 2021. The report can be downloaded from <https://www.shu.ac.uk/helena-kennedy-centre-international-justice/research-and-projects/all-projects/in-broad-daylight>

It should be pointed out that forced labour in the production of goods from China is not just present in solar related equipment. For example, it also impacts most phone and computer hardware we use. Thus, it is not a practical response to boycott all goods that may be tainted by forced labour in China. The ultimate solution is international pressure to get the Chinese regime to end its system of forced labour.