



"Providing high quality homes & services that put people first"

Tenant Information:

Solar PV Guidance

MHA's Mission Statement

"To provide **high quality homes & services** that put **people first**"



Monmouthshire Housing
Tai Sir Fynwy

Introduction

This booklet is issued by MHA to give you some extra information on the Solar PV Panels that have been fitted to your home.

Please contact the **Corporate Services Team** on **01495 761104**, if you require this document in PDF, large-print, Welsh or other language, braille or audio format.

FAQs

Over the next few pages are some of the most frequently asked questions about Solar PV Panels and the advantages they can bring to you and your home.

What is a Solar Photovoltaic (PV) system?

A Solar Photovoltaic system (or Solar PV as it is commonly known) is a renewable technology which utilizes free energy from the sun to generate electricity. The electricity produced by Solar PV can be used to drive anything from an appliance to a light bulb that is usually powered by the mains electrical supply.

How does Solar PV work?

Solar PV relies on daylight to generate power through the use of photovoltaic cells within roof mounted panels (modules). These modules are fixed to a roof and connected by cables into an inverter which is usually installed within the loft.

How much money will I save by using free electricity?

How much you save depends on how you manage your usage. Using dishwashers, washing machines, tumble driers and other appliances during the daytime can help you maximise your consumption of free daytime electricity. See page 7 for Tips & Advice.

How much power do we use in the home?

Everyone consumes energy, but sometimes it is hard to know just how much power is really being used in the home. Domestic electrical usage is measured in kilowatt hours (kWh) and the best way to understand what this means is to look at what a kWh does in everyday life.

A kWh of electricity can provide:

- **1200 electric shaves**
- **Drying your hair 15 times**
- **Listening to 15 CD's**
- **Using a small refrigerator for 24 hours**
- **Microwaving 20 meals**
- **4 evenings of light with 60W incandescent lamps**
- **An average 3-bedroom house uses between 9-10kWh per day**

(Source: Energy Savings Trust)

Example running costs of various everyday objects:

- **An electric cooker (feeding a family of four every day): 60 kWh/month = £7.24**
- **Lights (60watts for 4hrs in the evening): 7.2kWh/month = £0.87**
- **32" LCD TV (5 hrs per day): 19.7 kWhr/month = £2.38**

(Source: BRE Group)

How is the electricity produced by a Solar PV system connected to the electrical system in my house?

The power produced by the solar PV modules is converted to household electricity by an inverter and this is connected to the electrical system of the property via a circuit breaker in the consumer unit which then supplies all the electrical outlets within the property.

How do I know if I am using the free electricity or the grid supply?

The Solar PV system generates up to 2.0kwp of free electricity depending on system size and current weather conditions. Typically on a sunny day this means that if a high power appliance like a tumble drier is being used, all of the free generated electricity will be consumed with other appliances then being supplied from the grid.

What happened when there is little or no sunlight - e.g. during the winter months?

Solar PV modules do produce more electricity on brighter days; however sunlight is not a necessity. Even in the winter months when the sun is lower or the skies are overcast, Solar PV modules can still produce some electricity.

Will I still be liable for an electricity bill?

Yes, you will still receive a bill from your supplier, but free electricity generated by the solar system means that your consumption should be lower.

Will Solar PV protect my house from power cuts?

As a safety requirement the inverter constantly monitors the electricity supply from the Grid and must shut down immediately if the power supply fails. It will automatically restart when the power supply is reinstated on the Grid.

What is the difference between Solar PV and Solar Thermal?

Solar PV is a technology that uses the power of the sun to create electricity. Solar Thermal is a technology that uses the power of the sun to heat domestic hot water.

Tips & Advice

- **Appliances such as washing machines/tumble dryers/dishwashers - Don't run them all at the same time, stagger them, i.e. run them one after the other and don't be tempted to run part loads. Also, if you have them, use timers on appliances to run while you're out in the daytime and don't forget to stagger these times too.**
- **Lighting – replace old bulbs with low energy lightbulbs, turn lights off when you leave a room EVERY TIME. And close doors to retain heat**
- **Mobiles, toothbrushes, PC tablets, drills, rechargeable batteries etc – charge throughout the day.**

Glossary

Components of the Solar PV System

This next section is much like a glossary and will explain the parts and terminology you might hear said about your Solar PV system.

PV Modules (Solar Panels)

Solar PV panels capture the sun's energy using Solar PV cells. The solar PV cells convert daylight into electricity that can be used to run household appliances and lighting.

Remember: To maximise the effectiveness of the PV panels, use your appliances during daylight hours.

DC Cabling

This cabling connects the PV modules to the inverter and is normally installed within the loft space and is black in colour. Warning labels will be attached to this type of cable. Care must be taken when storing items within the loft space to avoid damage to this cabling.

DC/AC Inverter

Solar Inverters are used to convert (DC) electricity which is generated from your solar panels to household (AC) electricity which can be used via a Connection to your household electrical system. The inverter is usually installed in the loft although they can sometimes be installed in a utility room or cupboard if there's not enough area to locate within the loft space. It is very important to note that this inverter does get warm so please ensure that no materials are stored on or near the inverter location. Next to the inverter there will be switches for safe isolation of the solar PV system and to provide safe maintenance on the inverter. An isolation switch will be installed near to the DC/AC Inverter consumer unit as additional means of isolation of the solar PV system.

Please note: These switches are for emergency and maintenance use only.

Generation Meter

This meter is normally installed in the loft space and is for remote monitoring only. It enables Monmouthshire Housing Association to monitor the output of the Solar PV system and the total amount of energy generated to date via an onboard GSM or RF unit.

How to Contact us

General

If you have a housing-related query regarding your home or tenancy (including your rent), or would like to report problems with anti-social behaviour or a neighbourhood issue, please call the Head Office at Mamhilad on: **0345 677 2277** (local call rate).

Freephone Repairs Hotline (Including Emergency Out of Hours)

To report a repair or to contact us in an emergency when our offices are closed, please call our Freephone Repairs Hotline number on **0800 980 7751** or **01495 761143** (if you are calling from mobile)*

**Calls to our 0800 number may cost you more than the 01495 numbers if you are calling from a mobile phone.*

Email

You can also contact us via email: **communityservices@monmouthshirehousing.co.uk**

We aim to respond to emails within 3 working days.

Website

You can also contact us and find out the latest news and information about Monmouthshire Housing by visiting our website at: **www.monmouthshirehousing.co.uk**

Useful Contacts

MHA's Main Office:	0345 677 2277
MHA's Rent Line:	0303 123 1127
Repairs Helpline:	0800 980 7751
TV Licence:	0300 790 6131
Council Tax:	0345 372 3601
Homemakers :	01873 857 618

Utility Companies

Welsh Water:	0800 052 0130
Swalec:	0345 026 0656
British Gas Emergency:	0800 111 999

Useful Websites

Our Website: **www.monmouthshirehousing.co.uk**

MCC's Website: **www.monmouthshire.gov.uk**

Monmouthshire Housing Association



0345 677 2277



communityservices@monmouthshirehousing.co.uk



www.monmouthshirehousing.co.uk



Monmouthshire Housing Association

Nant-Y-Pia House, Mamhilad Technology Park

Mamhilad, Monmouthshire, NP4 0JJ



facebook.com/Monmouthshire.Housing



twitter.com/mon_housing



Scan the QR code to access
the MHA website.