

# Solar (PV) panels on houses

Not Costing  
the Earth



HOMES FIRST

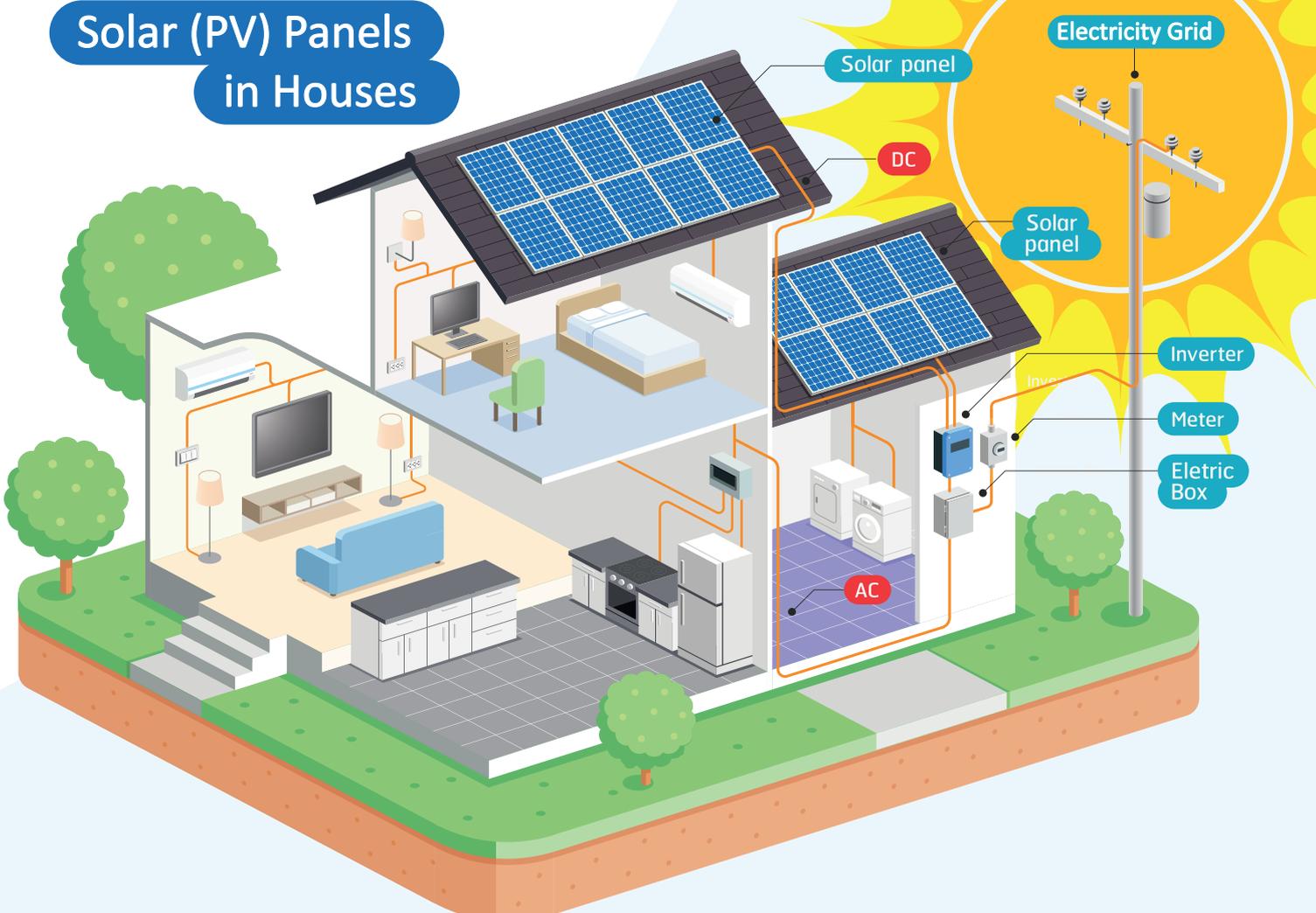
Working together to reduce our carbon footprint

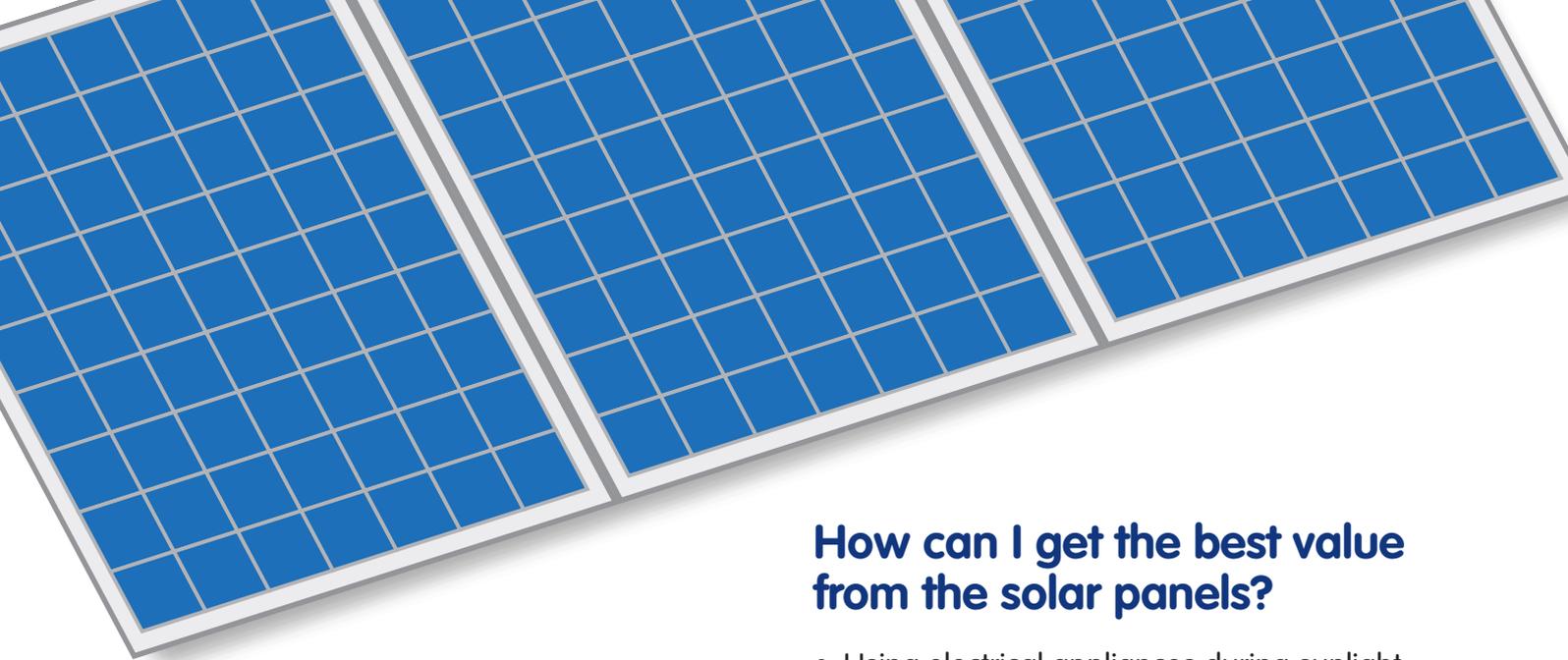
## Tenants User Guide

### Solar photovoltaic (PV) panels – an introduction

- A solar PV panel consists of cells made from semi-conducting material, most commonly silicon. When light shines on the semi-conducting material, a flow of electricity is created.
- Solar PV systems generate direct current (DC) electricity, but as electricity used for household appliances is alternating current (AC), an inverter is installed to convert DC electricity to AC.
- The council generates an income through the Feed in Tariff (FiT) which contributes to its overall budget and pays for council services.
- The FiT does not affect the supply of Solar PV electricity you receive from the panels.
- Solar PV provides your household with free daytime electricity.

### Solar (PV) Panels in Houses





## How does my Solar PV work?

- Panels generate most electricity on sunny days from Spring until Autumn. They do not generate electricity at night.
- On dull days only a small part of your electricity needs will be met by Solar PV.
- While Solar PV electricity is being generated it is available for you to use within your home. You do not pay for this electricity.
- The panels on the roof are connected to an inverter; this is usually in the loft or on the outside wall of your property. The inverter converts the power from DC to AC.
- A SIM card sends a signal to show how much energy is being generated. This is used a) to make sure your panels are correctly working b) so that the Council can claim the Feed in Tariff
- The panels have their own meter, which is often next to the electricity meter. This displays a figure when the solar PV is generating electricity.



## How can I get the best value from the solar panels?

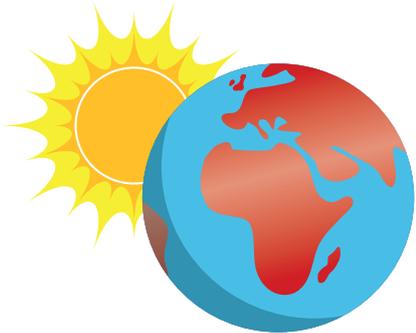
- Using electrical appliances during sunlight hours allows you to benefit from the free electricity generated by the solar panels.
- Any energy needed after the solar electricity is used up will be bought from the grid (your energy supplier), at a cost.
- The panels generate most electricity from Spring to Autumn when the sun is stronger and higher in the sky.
- On sunny days from Spring to Autumn enough energy can be generated to power appliances without drawing from the grid. Running several appliances at the same time will use more electricity.
- On cloudy and winter days the amount of solar electricity generated will be less, but a small amount of your household energy will still be powered by the solar PV.
- If you are out during the day, try setting timers for the washing machine and /or dishwasher.

## Electricity Bills

- The Solar PV electricity produced will not be shown on your bill.
- As less energy has been bought from the grid your bill will be lower than if all the electricity had been bought from the grid via your energy supplier.
- There is no refund for Solar PV, the saving is at source e.g., from the free Solar electricity you consume daily in your home.
- You can use any Energy Supplier.

## How do I know if my Solar PV is working?

- All solar systems have a SIM card which allows them to be monitored remotely, so if there are any indications of a fault these can be picked up.
- Activity on your Solar PV meter, usually located next to your electricity meter indicates your panels are working.



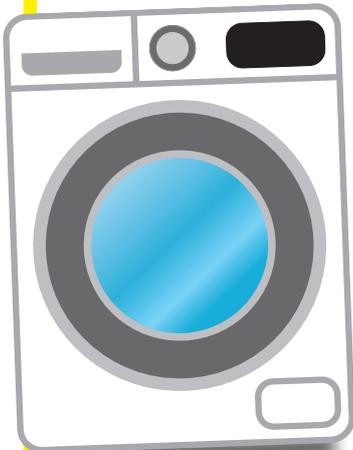
## How do Solar Panels help combat Climate Change?

- Sunlight is a renewable source of energy, unlike fossil fuels.
- When sunlight is converted into electricity no carbon dioxide is produced.

## Heating

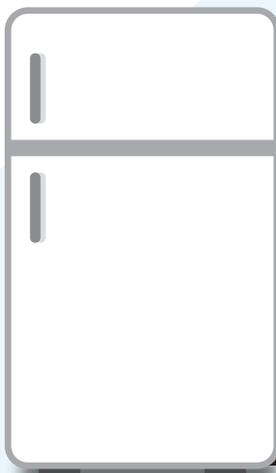
- Solar PV does not provide any heat to your home, only electricity.
- If your home is heated by electricity (for example by an Air Source Heat Pump, storage, or panel heaters), the Solar PV will offset the cost of running these during daytime hours.

## Energy Use of Appliances



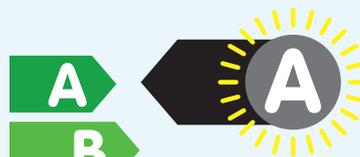
- Wet appliances such as washing machines and dishwashers use most electricity accounting for about **25%** of household energy used...
- Fridges and freezers make up **16%** of household energy use...

- Cooking accounts for **19%** - this includes kettles, hobs, microwaves, and ovens...



- Electric devices such as TVs, games consoles and laptops make up **19%**...

- **16%** is used up by lighting...



- Buying energy efficient appliances will use less energy and save you money over time.

# Energy Saving Tips and Help

- Close your curtains at dusk to stop heat escaping through the windows and check for draughts around windows and doors.
- Turn off the lights when you leave a room to save energy.
- Don't leave appliances on standby and remember not to leave laptops and mobile phones on charge unnecessarily.
- Fill the washing machine or dishwasher – one full load uses less energy than two half loads.
- Washing at **30°C** saves energy and money.
- A dripping hot water tap wastes in in one week enough hot water to fill half a bath. Fix leaking taps and make sure they are fully turned off.
- Only boil as much water as you need in your kettle.
- Spending only four minutes in the shower can save **£40** per year.
- Use energy saving LED light bulbs. They last up to 10 times longer than ordinary bulbs and using one can save you around **£50** over the lifetime of the bulb.
- In the UK we throw away over **650 million** batteries every year, polluting the soil and filling landfill sites. Rechargeable batteries save energy, and the slightly higher cost is recovered in the first five charges. Recharging costs are also minimal.
- Using a washing-up bowl rather than a running tap can save **£25** a year.

For more information on saving energy, visit: [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)

Citizens Advice offer an independent energy supplier comparison service, and provide good consumer advice: [www.citizensadvice.org.uk](http://www.citizensadvice.org.uk) or telephone them on: **03454 04 05 06**.

If you have any concerns or questions about your Solar PV panels, please contact:  
[zerocarbon@lewes-eastbourne.gov.uk](mailto:zerocarbon@lewes-eastbourne.gov.uk)

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