

How solar works

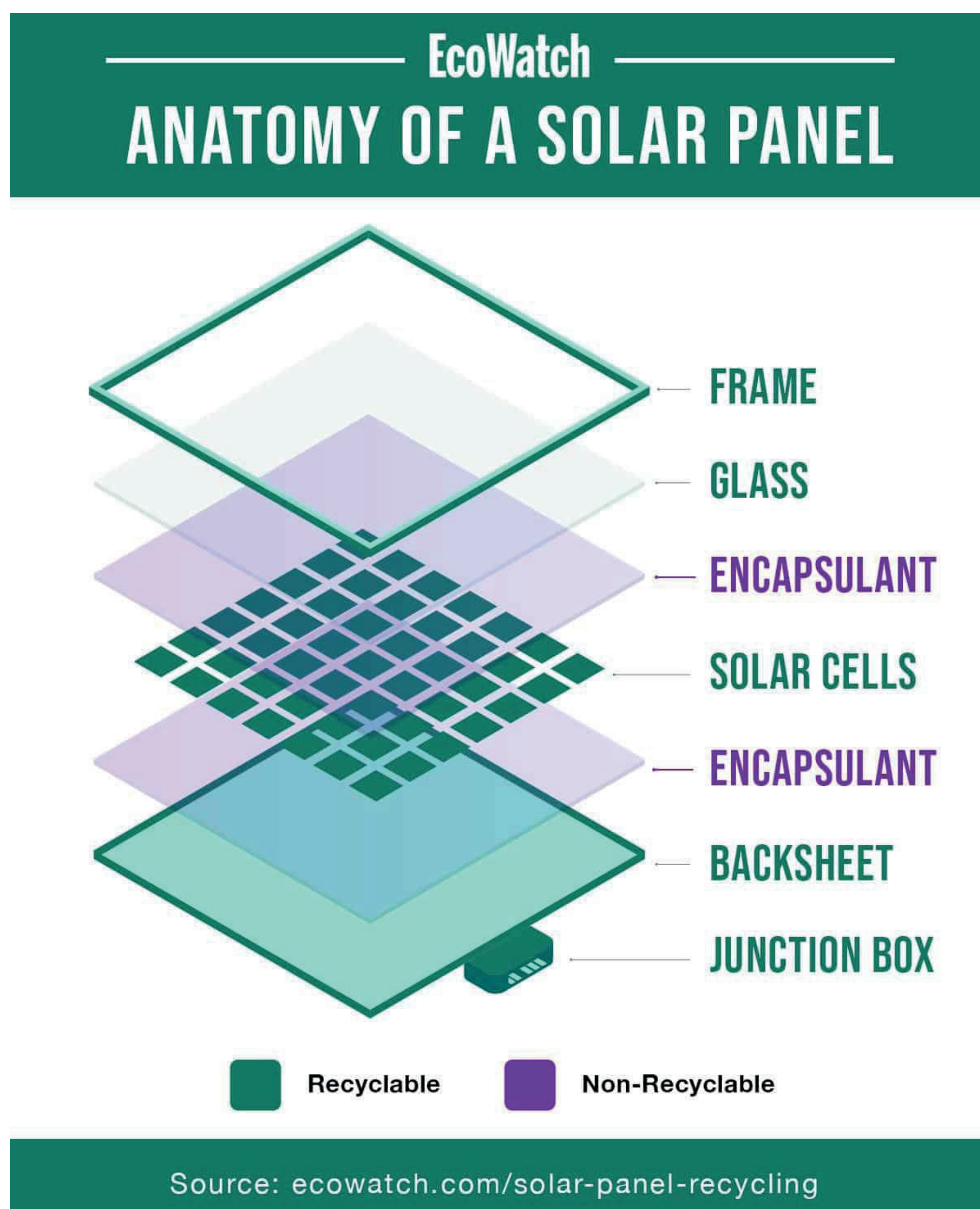
Solar PV panels are typically made from silicon, which is a great semi-conductor, installed in a metal panel frame with a glass casing.

The sun gives off light, even on cloudy days, and when these light particles, or photons, hit the thin layer of silicon on the top of a solar panel, they knock electrons off the silicon atoms which creates a direct current (DC) of electricity. This is captured by the wiring in the solar panels.

This DC electricity is then converted to alternating current (AC) by an inverter which is then funnelled into the grid network. AC is the type of electrical current used when you plug appliances into normal wall sockets.

Bifacial modules have two sides of solar cells, enabling additional energy generation from the diffuse light reflected off the grass, on the rear-side of the panels.

In most cases solar panels are recyclable and there are well established industrial processes to do this. There are organisations around the UK and Europe specialising in solar recycling, such as PV Cycle and the European Recycling Platform. They are working with solar developers to minimise electrical waste and recycle old panels in line with the Waste from Electrical and Electronic Equipment ¹ (WEEE) regulations.



¹ https://environment.ec.europa.eu/topics/waste-and-recycling/waste-electrical-and-electronic-equipment-weee_en