



The Solar Roof | Photo source © V8 Architects

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## STAINED GLASS SOLAR PANELS BRING AESTHETIC BEAUTY TO SUSTAINABLE ENERGY

 ARCHITECTURE & DESIGN

### Lightweight and modular, the panels are easy to reuse as design requirements change and adapt

**Spotted:** Dutch solar designer Marjan van Aubel has introduced solar panels that look as if they are made from stained glass, as part of The Netherlands' pavilion for the Dubai design expo. The panels consist of lightweight PET (polyethylene terephthalate) plastic, overlaid with fully coloured stickers that look like stained glass.

The panels produce solar energy via a titanium dioxide nanomaterial that turns sunlight into electricity. The stained glass design is made from light-absorbing organic dyes that cover the nanoparticles, and the combination is then transferred to the translucent panels.

Van Aubel focuses her work on making everyday objects more sustainable through integrated solar energy production. As PET is the most recycled plastic in the world and used over and over again, it works well as a long-lasting base for the new solar panels. Should the panels no longer be needed, they could be recycled. But more likely, once they are in wider use, the panels will be moved whenever needed depending on the changing design requirements of the structures they are powering.

Alternative energies are increasingly being incorporated into wider ranges of products and designs. Springwise has spotted a [cargo box solar panel](#) for vehicles, which provides off-grid power, and a [solar-powered electric aircraft](#) designed for long-term air-borne research projects.

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## Takeaway:

Because the Sahara Desert receives more than 12 hours of sunshine per day, only slightly more than **one per cent** of the landmass needs solar panels to provide enough energy for the entire world. Such a development would require hugely efficient and sturdy energy storage and transport facilities. Cross-border collaboration would be needed, and communities could get involved by helping test prototypes. Thinking big may help innovators shape the future by leapfrogging today's limitations with tomorrow's technological solutions.