



Energy positive buildings | Photo source [Teodor Drobot on Unsplash](#)

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## ENERGY PRODUCING BUILDING GENERATES MORE ENERGY THAN IT USES

 SUSTAINABILITY

**An energy positive classroom in the UK can produce 1.5 times the amount of energy it consumes.**

Researchers from [Swansea University](#), Wales have designed the Active Classroom – a classroom capable of producing more energy than it uses. The Active Classroom has been running since 2017 and the collected data shows it can produce one and a half times the amount of energy it needs. As part of the second stage of their project, the researchers have now launched an Active Office. The new building sits next to the Active Classroom.

The Active Office uses solar cells, a photovoltaic thermal system and lithium ion batteries to generate, store and release solar energy. Buildings account for a large share of the UK's energy consumption at 40 percent. Creating low-carbon buildings that generate their own energy and more can help change this percentage. In addition to reduced carbon emissions, these energy positive buildings can create lower energy costs for consumers. Furthermore, the Active Office and Classroom will share the energy they produce with each other and also with electric vehicles. A working energy sharing system will help the researchers demonstrate how a future solar-powered community can function.

The building designers are [SPECIFIC](#), a UK Innovation and Knowledge Centre led by Swansea University. [Innovate UK](#), Swansea University and the Welsh Government's [European Regional Development Fund](#) all contributed to the funding of the project. Ian Campbell, Executive Chair of Innovate UK, said: "It's difficult to overstate the potential of developing a building that powers itself.

The concept could genuinely revolutionise not only the construction sector but completely change how we create and use energy.”

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Website: [www.specific.eu.com](http://www.specific.eu.com)

Contact: [www.specific.eu.com/contact](http://www.specific.eu.com/contact)