

First Building as a Power Station



The Pod

Our first complete building as a power station was built at Baglan Energy Park in 2014.

The pod has fully-integrated technologies that enable it to generate, store and release its own heat and electricity from solar energy.

It is a completely off-grid self-sufficient building concept.

Electricity generated by the Building Integrated Photovoltaics (BIPV) on the roof is stored in batteries. This electricity is used to power lighting, small electrical appliances and heating within the space.



Heating is provided by a novel glazed solar air collector, supplemented by an electric heating system developed at SPECIFIC. The control system for the building regulates the heat within the space, intelligently selecting the best method of heating depending on climatic conditions.



A simple interface panel displays relevant information on the operation of the system and allows the user to control the temperature within the space.



Led by



Swansea University
Prifysgol Abertawe

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Engineering and Physical Sciences
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We work with
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Combining many of the technologies currently under investigation at SPECIFIC, the first building as a power station allows us to showcase and test the entire 'generate, store, release' system as well as the individual technologies.

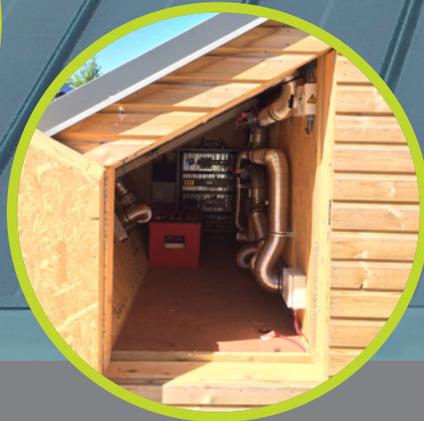
This demonstrator pod shows that it is possible to power and heat a building without connecting to existing services, which reduces the cost and time for installation, reduces running costs, and makes it suitable for sites with no or limited grid connection.



The building was designed by SPECIFIC and constructed in partnership with:



Bespoke software and a user-friendly interface were commissioned, to enable easy control and optimisation of the performance of the entire system.



We are now seeking new opportunities and partners to implement this concept at a larger scale on both new and existing buildings - looking for potential applications and markets and for industry partners to commercialise the technology.

Strategic Partners

