

ABC: delivering **zero carbon** solutions across industry using **evidence based engineering, advanced digital capability and unrivalled site service**



The Active Building Centre

The Active Building Centre (ABC) is a national centre of excellence accelerating the UK's drive towards Net Zero by transforming the way in which homes, workplaces and communities are powered and heated.

ABC's impact in the last 2 years has been disproportionate to our size. During our tenure as an RTO, ABC's leading-edge advice has already positively influenced over £2bn of live construction projects saving an estimated 205,000 tonnes of carbon.



Active
Building
Centre

We offer



Strategic consultancy

- › Independent technical advice and support for organisations on approaches to Net Zero for development-scale, building-scale, and retrofit
- › Physical system trials and optimisation
- › Data gathering and evaluation/management of building performance in use.



Fabric and Services Optimisation

- › Location-specific, dynamic energy simulation and modelling based on demand
- › Products for energy management at development and building scale; systems efficiency expectations
- › Specifications and selection
- › Heat pump efficiencies and storage integration
- › Renewables integration
- › Whole life cost and carbon assessments
- › Whole building retrofit assessment.



Product Development

- › Partnership opportunities for the development and integration of systems and product performance
- › Examples based on research to date
- › Battery and battery safety systems (BESS)
- › IoT platforms and smart energy balancing and trading
- › Building owner/occupier "how to" guides
- › Product accelerator support.



Skills mentoring and Training

- › Facilities and Resources for business and trainer upskilling
- › Toolkits and information packs.

Our Facilities



- › Three living residential labs – demonstrator homes of successive generations, built with the latest renewable technologies to generate and analyse real world data
- › Accelerator space for product development
- › State of the art facility to modify, integrate and test various green technologies such as heat pumps, thermal storage batteries, steam, hydrogen and solar
- › District heat network lab of 400 kW capacity to provide data at community scale
- › An environmental chamber to test and measure active technologies to provide performance data under standardised test conditions
- › ATEX certified test chamber to safely assess more environmentally friendly system technologies, including hydrogen and propane
- › Technology & data analytics facility to assimilate data and create intelligent active technology algorithms.



Let ABC give you the tools to make a development truly NET ZERO CARBON. We have a proven, evidence-based methodology for cutting emissions and reducing energy consumption in your existing or new build developments.

In addition to the capitably funded facilities in Berkeley, we have strategically embedded ABC resources to drive innovation and reduce the cycle time of knowledge across carefully selected projects, representing typical UK stock, significantly expanding our body of knowledge. To inform ongoing and future client outputs.



Domestic Residential

Innovative Housing Programme

Coordinated by the Welsh Government, ABC is installing circa 600 energy and environmental monitoring systems across the social rented sector, with data capture and analysis to inform future investment in innovative technologies.



Education setting

Y Twyni

A two-storey modular lecture theatre facility on Swansea University's Bay Campus, where the installation of rooftop photovoltaic solar panels, battery storage and rapid EV chargers enable renewable energy generation and storage to power the buildings and the University's EV fleet during times of peak grid stress.



Commercial workplace

Cross Hands East Business Park

Construction of up to 38,000sqft (3,530 m²) of commercial space focussing on Innovation, Technology and Skills within the national thematic sectors of Tradable Services, High Value Manufacturing and Enablers (ICT, Energy, Environment and Advanced Manufacturing). ABC is working with Carmarthenshire County Council to deliver highly energy-efficient, potentially Net Zero carbon buildings that intelligently interact with the power grid.



Healthcare setting

Imperial Park 5

An NHS warehouse in Newport, identified as a candidate for energy reduction and generation upgrades. ABC is working with Welsh Government Energy Service and Western Power Distribution to explore opportunities to establish, manage and optimise facility's energy flow and inform upgrade decisions.



Community Scale Trading

Trent Basin

Housing development in Nottingham, which is pioneering the use of 'energy bubbles', with the installation of community-owned solar PV, battery storage and enabling infrastructure to supply residents with renewable energy generated from community-owned sources, in parallel to conventional grid supplies.



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