

# Introduction

## Sustainable Building Envelopes

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## Low Carbon Research

LCRI has united low carbon energy research interests across academia, industry and government.

It provides a solid research base for existing Welsh industries.

It is an example of how government funding can be used to build research capacity and create jobs in Wales.

**LCRI is a unique partnership between Academia, Government and Industry to drive forward the low carbon agenda.**

**Government**  
Policy and funding

**LCRI** LOW CARBON  
RESEARCH INSTITUTE

**Universities**  
Research and  
training

**Industry**  
Development and  
implementation



# Projects Areas

Zero Carbon Buildings

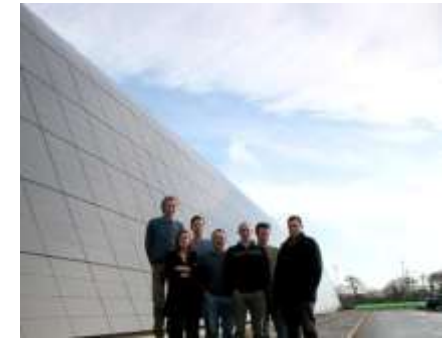
Marine tidal flow energy

Hydrogen

Photovoltaic energy systems

Large scale power generation

Bio-energy



# Low Carbon Built Environment

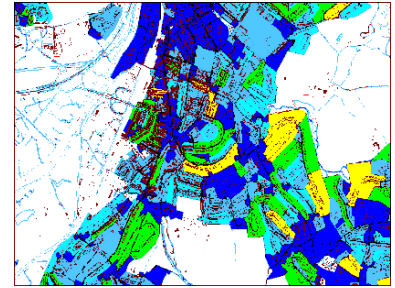
## Components



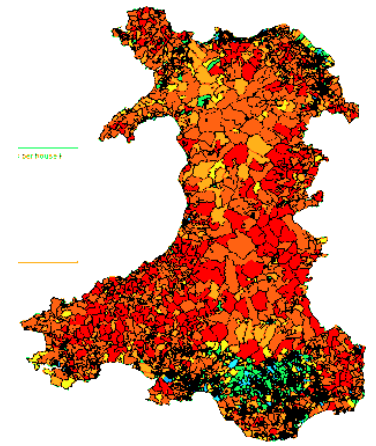
## Low Carbon Buildings



## Urban Scale



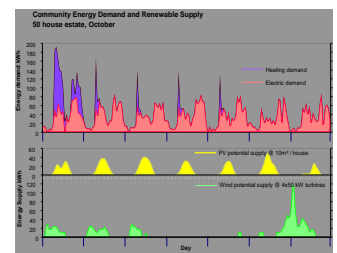
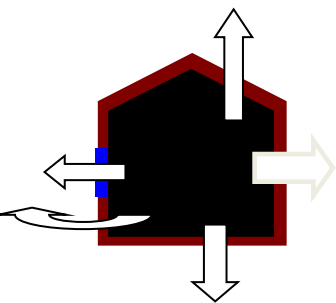
## Regional



Demand



Supply



# BUILDINGS AS POWER STATIONS



Envelope as an energy collector



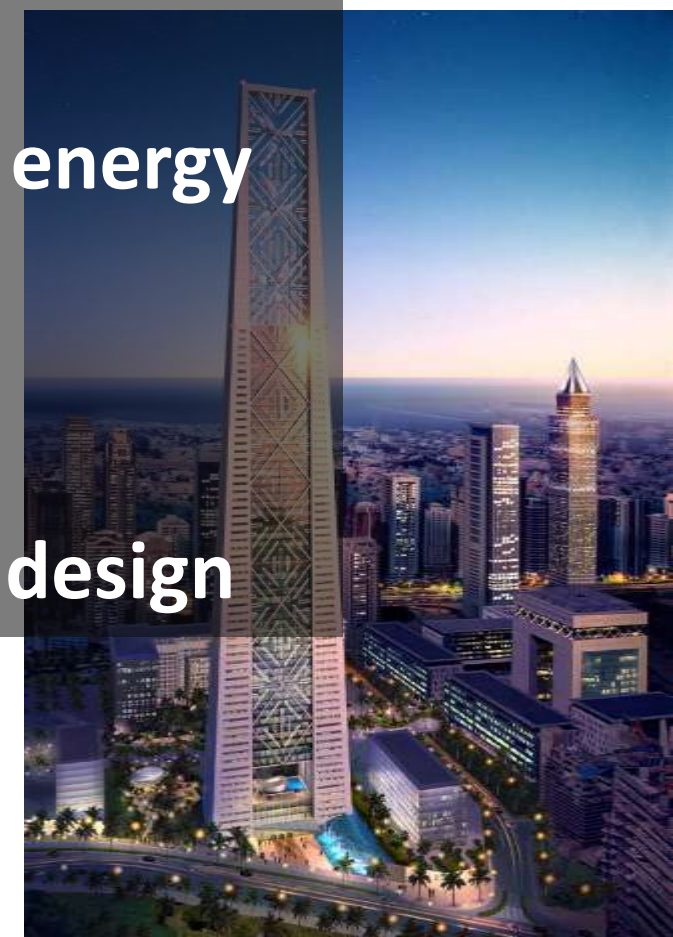
Thermal and electrical energy



Lower cost



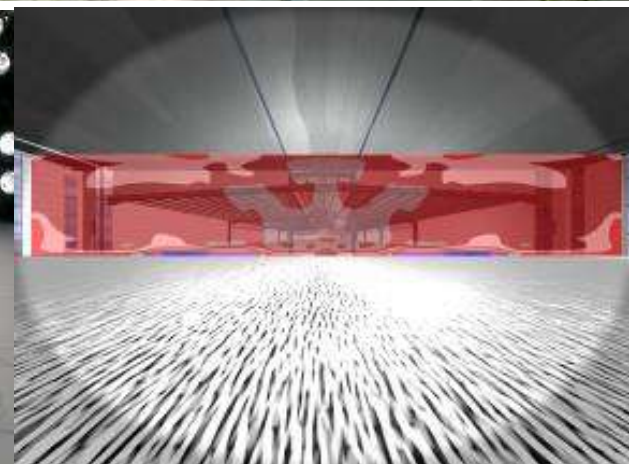
Better integrated into design



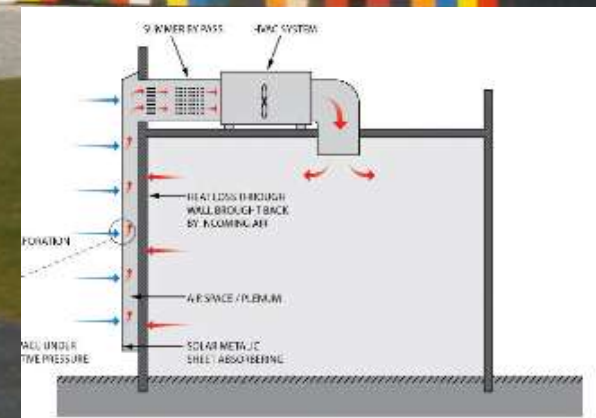
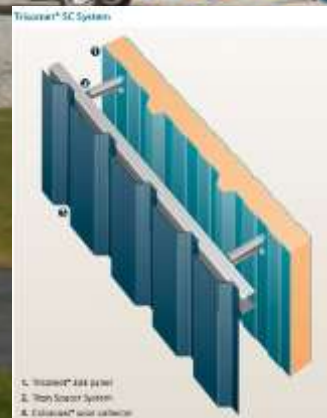
# Energy generating buildings

## Baglan Energy Park

low energy design - renewable energy - good productive environments

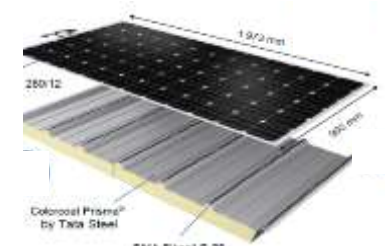
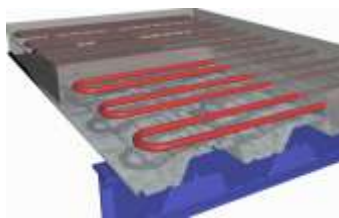
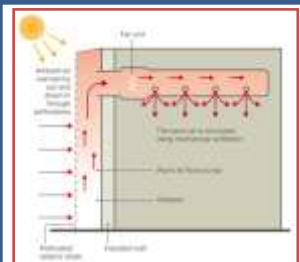


# Sustainable Building Envelope Centre (SBEC)



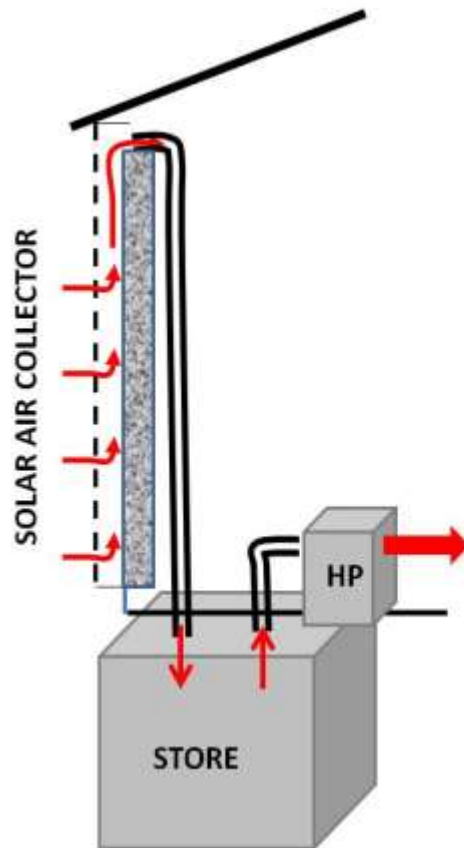


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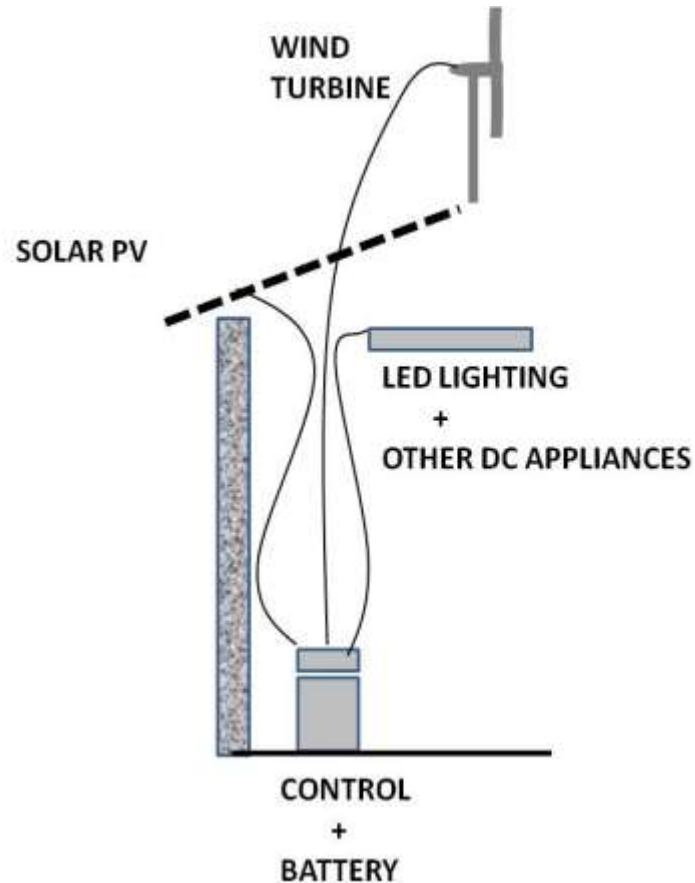


linking energy supply, to demand and storage

## Thermal



## Electrical



**SBED is an example of what we can do in Wales**

The **Welsh Government's** commitment to low carbon buildings.....

... the **LCRI** working with **industry** to drive innovation forward....

.... **new products** will create massive **job opportunities**....

... **demonstrating** renewable energy technologies.....

.....**that will shape the future**

**Thank you**