Distributed Energy
Powering Wales

Wales Economic Benefit Analysis: Three Key Sectors

Industry

Healthcare

Hospitality and Leisure

centrica
Business Solutions

Our analysis suggests that if just 50 per cent of the three key sectors utilised distributed energy solutions it could deliver the following for the sectors in Wales:

Healthcare

£9m
per annum

NHS Wales

- Reduce energy costs by £9m per annum
- Contributing £50m for Welsh GVA

Industry

£28m
per annum

Industrial

- Reduce energy costs by £28m per annum
- Contributing £900m for Welsh GVA

Hospitality and Leisure

£12m
per annum

Hospitality and Leisure

- Reduce energy costs by £12m per annum
- Contributing £140m for Welsh GVA

Additionally, we have calculated the potential saving from distributed energy solutions across all non-domestic electricity consumption in Wales to be £154m. This figure is based on reductions of 15 per cent on bills – which we have found to be achievable from sites where we have installed these technologies.

Powering Wales

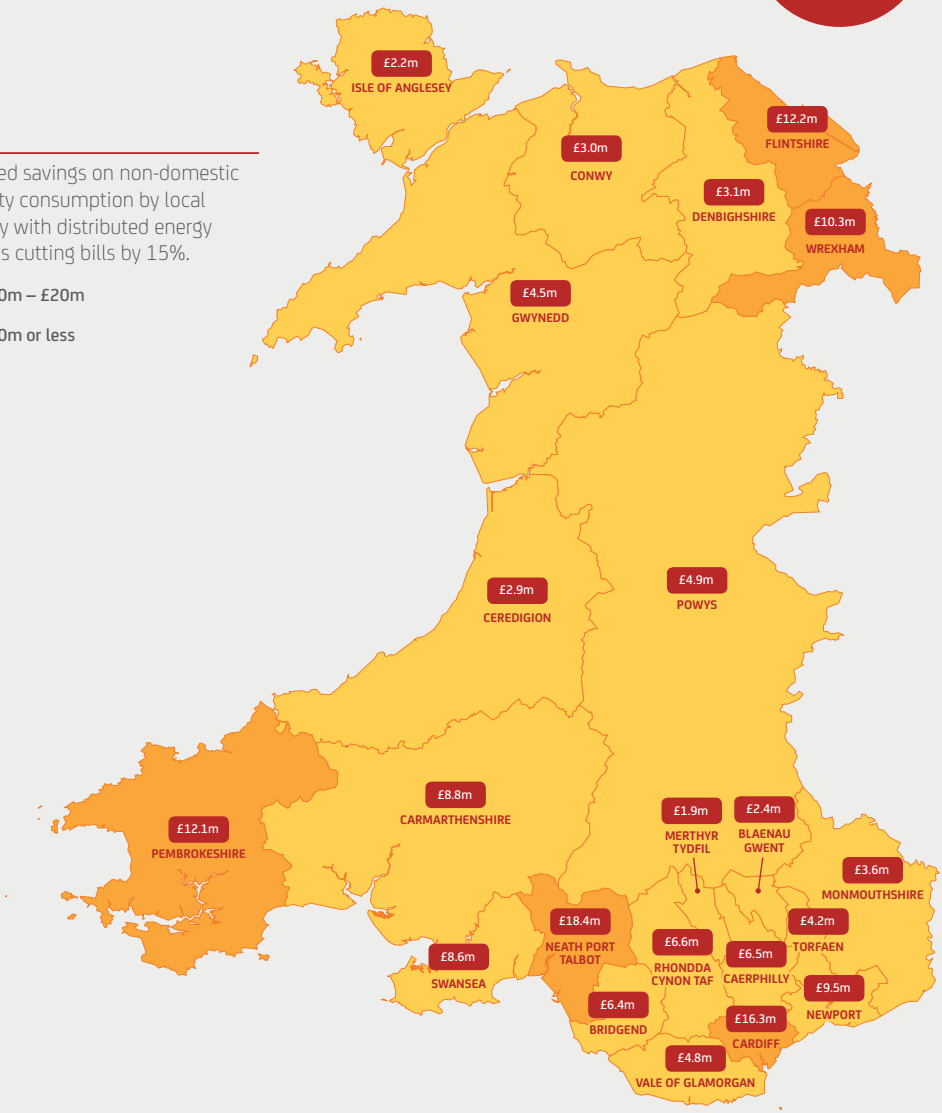
Non-domestic electricity consumption by local authority

£154m savings across Wales

Key

Estimated savings on non-domestic electricity consumption by local authority with distributed energy solutions cutting bills by 15%.

- £10m – £20m
- £10m or less

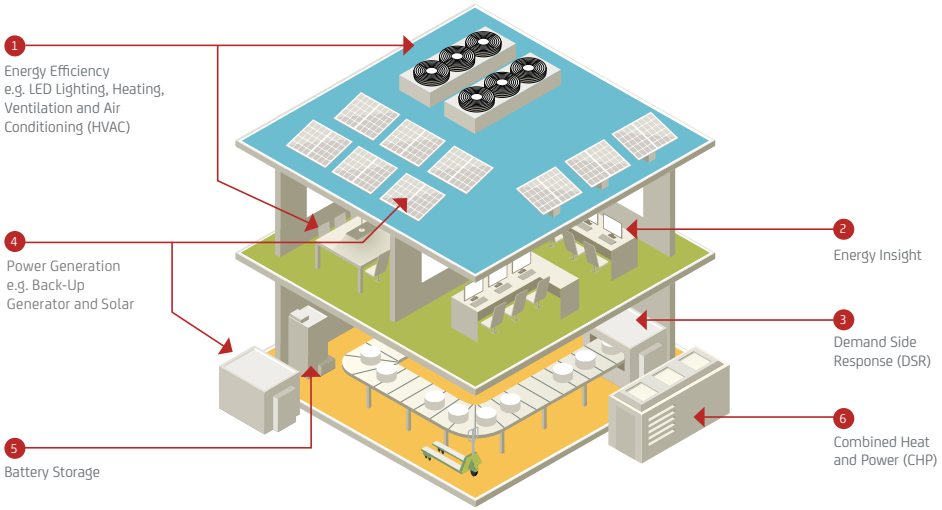


What is distributed energy?

The first step in understanding the potential of distributed energy solutions is understanding what the term means.

The World Alliance for Decentralised Energy defines this as "electricity production at or near the point of use, irrespective of size, technology or fuel used – both off-grid and on-grid." We believe that this is a good start, but is too narrowly defined.

Distributed energy should also cover a much broader range of solutions, including energy efficiency, monitoring and on-site generation, that can help organisations to take control of their energy and turn it into an opportunity.



1. Energy Efficiency

Reducing costs by upgrading or improving a range of energy-consuming processes.

2. Energy Insight

New technology is available that allows larger energy users to accurately monitor their energy use across all equipment and devices. For example, Centrica Business Solutions' own Panoramic Power technology.

3. Demand Side Response (DSR)

Revenue streams are available for energy users if they are able to reduce, or even increase, their energy consumption at times when the grid demands it. New technology allows energy users to respond to these changes in demand quickly and easily and without putting security of supply at risk.

4. Power Generation

A range of small-scale power generating technologies can provide on-site generation; delivering back-up power and the ability to sell excess energy back to the grid.

5. Battery Storage

Lithium-ion battery storage systems can be charged at cheaper times and then used when prices increase to better manage energy costs. They can also work alongside renewable technologies, which on their own are intermittent, and can be used to support the grid, which will create new revenue.

6. Combined Heat and Power (CHP)

CHP plants work by converting gas into both electricity and heat in a single process. It's one of the most efficient sources of energy and allows significant amounts of energy to be produced on-site, improving the resilience of supply, reducing costs and helping to reduce carbon emissions.

This summary has been compiled from our Powering Britain report, which you can see here: www.centrica.com/news/powering-britains-economic-future
For more information about distributed energy solutions and case studies of some of our projects: centricabusinesssolutions.com