Distributed Energy
Powering London's Economic Future

Autumn 2018

Powering Performance

Powering Resilience

Powering the Future

Centrica is helping organisations take advantage of intelligent, end-to-end solutions so they can monitor, manage and optimise their energy to power performance, resilience and growth.

See inside for what this means for key sectors of London's economy and how your area could benefit.

centrica
Business Solutions

We have calculated the potential savings from distributed energy solutions across all non-domestic electricity consumption in London to be **£398.8 million.**

This figure is based on a reduction of 15 per cent on bills – which we have found to be achievable from sites where we have installed these technologies.

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

Industry

£83m
per annum

Industrial

- Reduce energy costs by £83 million per annum
- Contributing £2.1 billion for London GVA

Healthcare

£23m
per annum

NHS London

- Reduce energy costs by £23 million per annum
- Contributing £160 million for London GVA

Hospitality and Leisure

£49m
per annum

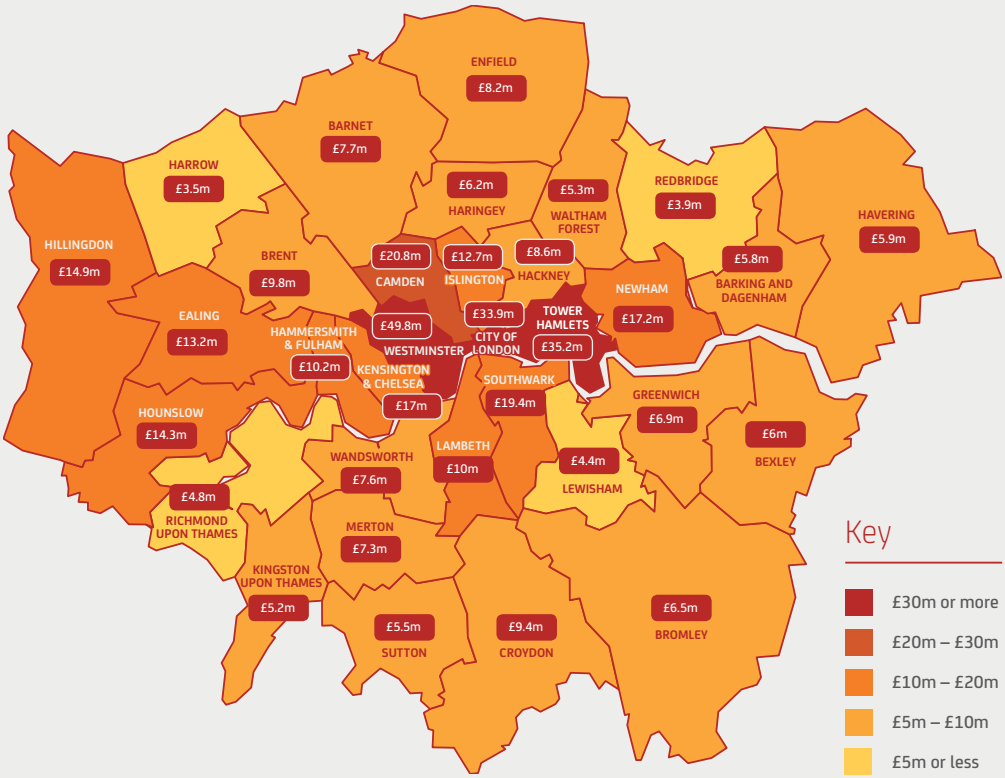
Hospitality and Leisure

- Reduce energy costs by £49 million per annum
- Contributing £582 million for London GVA

These three sectors alone then would add £2.8bn to the GVA of London, supporting an estimated 40,500 jobs.

Powering London

Breakdown of projected savings across the 33 local authorities of London



CASE STUDY:

£1m savings for NHS Hospital

St George's Hospital in Tooting, South London, has recently completed a major overhaul of its energy centre that will see annual savings of at least 10 per cent off its energy bill.

Delivered by Centrica Business Solutions, the project is guaranteed to save the hospital over £1m per year with no upfront cost, while also reducing annual carbon emissions by 20 per cent (6,000 tonnes) - equivalent to taking 3,000 cars off the road.

Opened in June, the new energy centre features two combined heat and power (CHP) units that will deliver almost all of the power needed to run the hospital. Centrica also installed four boilers, a highly efficient chiller system, and energy efficient lighting and controls.

During the work on the energy centre, it was crucial that the boiler house remained operational as the steam generated by the boilers is used to generate heat and hot water for the rest of the hospital. Centrica Business Solutions managed the installation without any impact on the hospital and its patients.

The St George's energy centre has been delivered under a 15-year Energy Performance Contract that will include operations and maintenance support.

"...By saving £1m annually for the next 15 years, the contract will go a long way to help us maximise the resources we can put into patient care. It also massively cuts our carbon emissions and improves our overall sustainability."

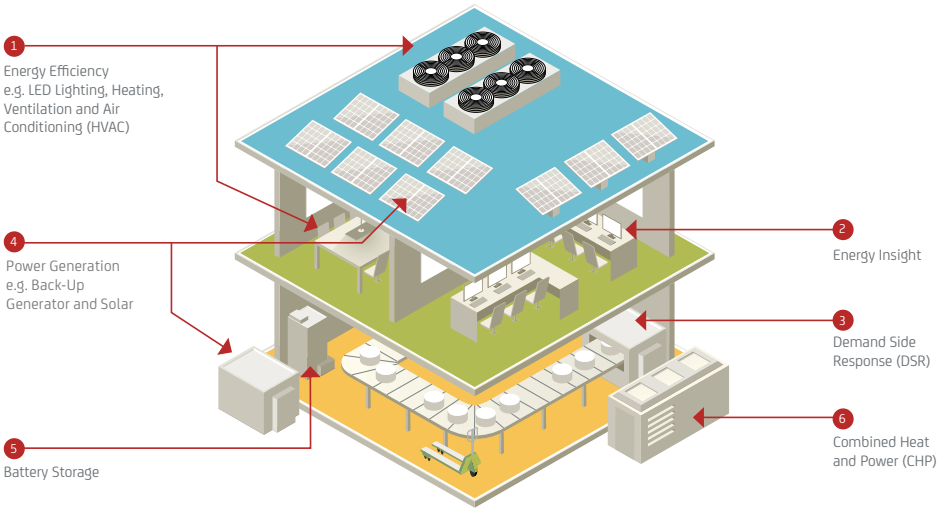
Kevin Howell, Director of Estates & Facilities, St George's University Hospitals NHS Foundation Trust

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