

# The Olde House, new energy thinking

Centrica signs up first business in Cornwall Local Energy Market trial with new energy storage machines supporting The Olde House, making it the largest commercial storage system of its type in the UK.



## Rewarding smarter energy decisions

The Olde House was exporting excess solar energy in the day, and importing expensive energy from the grid during peak evening times when holiday makers returned from the beach.

## Capturing energy

Centrica's Local Energy Market (LEM) trial helped fund and oversee the installation of six storage machines at The Olde House in North Cornwall. The energy storage machines will shift excess solar energy to times when it is needed onsite, and the units will be connected to Centrica's new LEM software platform to trade balancing services to the Cornwall grid. The pioneering storage flow technology is the largest commercial operating system deployed in the UK to date.

The 1MWh energy storage machines will be connected to The Olde House's 250-kilowatt solar array, which provides power to the site. The solar panels also power an onsite electric vehicle charging station, as well as 30 holiday cottages.

The engagement with The Olde House is part of a £19m trial that will test the role of flexible power generation and storage in up to 150 homes and businesses county-wide. The trial aims to support the future development of renewables in the region by reducing grid constraints through flexible demand, generation and storage.

## The results

The Olde House will significantly improve utilisation of onsite solar PV and save up to 50% on peak price energy imports. Thanks to the new energy storage machines, which store solar energy from the day for use at night during peak times, it has eliminated the need for expensive grid imports. Through tracking and dynamic response to calls from grid operators for flexible services, The Olde House can also generate revenue.

Overall, it represents a huge step toward energy independence for The Olde House. Centrica's LEM team has been working to recruit homes and businesses to take part in the project since its launch in December 2016. It has already carried out energy audits at 56 business sites. Applications have come from businesses looking to access a £8.6m funding pot to cover the cost of a variety of initiatives (including energy audits, smart technology upgrades, CHP and new energy storage units) that can help unlock money making potential and reduce energy costs.



Total hours of storage



50% reduction in grid imports during peak times



Providing power to 30 holiday cottages



Energy storage machines connect to The Olde House's 250-kilowatt solar array

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We generate large amounts of electricity throughout the day, but unfortunately cannot utilise it all. With the installation of these energy storage machines, we will be able to store the energy until times when we have a higher demand.”

Shaun Hawkey, The Olde House

## Why change?

redT energy storage machines offer:

- A 25-plus year asset that's safe and modular
- 100% depth of discharge
- Long duration storage, with rapid response capabilities
- Very low maintenance requirements
- Ability to operate at temperatures up to 55°C