





Renewable Case Study

TEAM support Sainsbury's as it aims to become the UK's greenest grocer.

Sainsbury's is one of the UK's largest supermarket chains and is fast becoming the country's greenest grocer as it strives to reduce its impact on the environment.

With the help of TEAM's Energy Services the retailer is actively promoting and investing in the production of renewable heat, making it one of the largest users of biomass energy within the food retailing sector.

Phil Osborn
Sainsbury's Head of Energy

Background

Sainsbury's was founded in 1869 and today operates over 1,200 supermarkets and convenience stores in the UK, employing around 161,000 staff.

The supermarket giant has used TEAM's Energy Services since 2011 and its investment in onsite renewable technologies forms part of the retailers ambitious sustainability target to reduce operational carbon emissions by 30% absolute by 2020 compared with 2005. This is part of a broader target of an absolute carbon reduction of 50% by 2030.

The supermarket giant is investing hundreds of millions into sustainable technologies and initiatives after agreeing a £200 million 'Green Loan' last summer. It is using the cash to fund clean energy generation, energy efficiency and natural refrigerant projects including the installation of LED lighting, biomass boilers and ground source heat pumps across its store estate.

In 2013, Sainsbury's opened two of its most environmentally friendly stores to date. The retailer has described the stores in Leicester and Weymouth as 'Triple Zero' meaning that they produce zero carbon emissions from the operational energy use, send zero waste to landfill, and have zero impact on water usage in their local catchment areas due to their 'Water Neutral' status.

Working with TEAM

TEAM carries out all of Sainsbury's Independent Reports on Metering



Arrangements (IRMA), as well as the RHI application process and heat loss calculations.

Natalie Johnson, Energy Engagement Manager at Sainsbury's said: "We turned to TEAM who we knew had a lot of experience in RHI metering requirements. TEAM now does all of Sainsbury's independent reports on metering arrangements, all of our heat loss calculations and undertakes our RHI application process."

The Renewable Heat Incentive was introduced in November 2011 to support technologies that generate heat from renewable sources. These include biomass boilers, ground source heat pumps, solar thermal hot water, some biogas and combined heat and power applications.

An IRMA report can be key to getting RHI approval and can only be carried out by an "unbiased and impartial" independent engineer who meets specific criteria.

TEAM's experienced and qualified engineers help provide Sainsbury's with the necessary support to ensure a comprehensive report is submitted to Ofgem. This includes a site visit to examine the physical installation; an examination of the system schematics to

TEAM
(Energy Auditing Agency Ltd)

34-38 The Forum
Rockingham Drive
Linford Wood
Milton Keynes
MK14 6LY
United Kingdom

t +44 (0)1908 690018
e enquiries@teamenergy.com
w teamenergy.com



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Why choose TEAM?

TEAM provides an extensive range of Energy Services to help organisations reduce energy costs and emissions. We can support you from legislation compliance to successful completion of energy saving projects delivering reduced costs, consumption and carbon emissions. Our services are extremely flexible, enabling you to choose a level of support to suit your requirements.

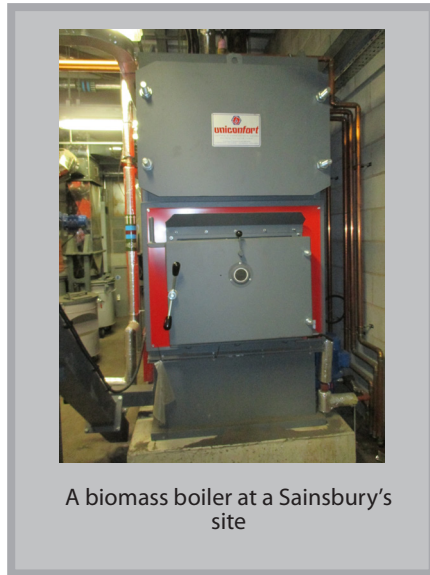
TEAM
(Energy Auditing Agency Ltd)

34-38 The Forum
Rockingham Drive
Linford Wood
Milton Keynes
MK14 6LY
United Kingdom

t +44 (0)1908 690018
e enquiries@teamenergy.com
w teamenergy.com



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A biomass boiler at a Sainsbury's site

ensure heat metering is positioned correctly and making sure that meters are fully compliant.

Justine Grant, TEAM's Senior Energy Consultant, said: "We also provide advice on whether the most appropriate meters have been specified, carry out any heat loss calculations for external pipes/ineligible loads and pull together all the necessary documentation and certificates."

Sainsbury's Head of Energy, Phil Osborn, said: "It's great to work alongside a company who knows what they are talking about and has the confidence to take the process right from the conception to the audit process."

Renewable Energy

Renewable energy is generated from natural resources such as the sun, wind, and water, using technology which ensures that the energy stores are naturally replenished.

Sainsbury's continues to invest in securing more energy from renewable sources. In 2013, the company installed its 100,000th solar panel making it the largest user of multi-site solar panels in Europe, and now has circa 40MW of generation installed.

Its 72,000 sq ft store, in King's Lynn, Norfolk, features eco-initiatives such as 1,000 solar panels on its roof to generate electricity, ground source heat pumps under the car park to heat the store, rainwater harvesting and natural refrigeration.

Biomass boilers provide renewable heat to a number of its stores.

Mr Osborn added: "Since the first installation in May 2008, Sainsbury's has fitted 96 biomass boilers across our store estate, making us one of the biggest users of this technology within the food retailing sector."

Similar to biomass Sainsbury's continues to roll out and retrofit Ground Source Heat Pumps (GSHP) to its estate and already has 24 operating successfully in larger stores.

Stores in Godalming, Wolverhampton, Fosse Park in Leicester and Calcot in Reading have all had this energy efficient technology installed.

"We want to evolve the ground source heat pump so we can use it on smaller sites, whilst delivering the energy saving benefits seen on larger sites." said Mr Osborn.

The retailer is now trialling its first medium-sized store GSHP at its Dartmouth store.

Benefits

Using TEAM's Energy Services has helped Sainsbury's to generate income from renewable energy sources.

Mr Osborn said: "TEAM have been instrumental in helping us achieve our RHI subsidy and strengthening our relationship with Ofgem. The skills and knowledge that they offer has been an incredible support to us over the years. We have an excellent working relationship with TEAM and we hope this will continue for many years to come."

The future

Sainsbury's 20x20 Sustainability Plan aims to ensure the company remains at the forefront of sustainability to 2020 and beyond.

Mr Osborn said that the supermarket was very focused on meeting its tough carbon reduction targets by 2020.

He said: "We aim to be the UK's Greenest Grocer and achieve our 20x20 target to reduce our operational carbon emissions by 30 per cent absolute. To do this we're now building and running highly sustainable, low carbon stores."

Despite adding more than 46% more floor space to its estate since 2005/06, Sainsbury's has brought its total energy usage below that of the 2005/6 level.