

# SADBERGE RENEWABLE ENERGY PROJECT

## Background

Sadberge has followed up its award-winning energy saving project with a scheme to install solar panels to deliver both financial and climate benefits.

The Sadberge Renewable Energy Project has been organised by the Sadberge Climate Change Working Group, which was formed in 2008 to address the Parish Plan objective for Sadberge "to be environmentally responsible, and in particular to make a contribution towards combating climate change".

The Sadberge Energy Saving Project, which ran during 2008 and 2009, involved working with the Energy Saving Trust to give advice on practical ways to save energy (and money!), setting up bulk purchase schemes for central heating boilers and double glazing, lending out smart electricity monitors so that villagers could monitor their electricity use and identify opportunities to make savings, and taking infra-red photographs of village houses on a cold February evening to show where heat was escaping.

Towards the end of 2010, the Energy Saving Trust suggested that the Sadberge Climate Change Working Group might consider setting up a bulk purchase scheme to encourage Sadberge residents to install solar photovoltaic (PV) systems. This suggestion evolved into the Sadberge Renewable Energy Project.

## Objective

The objective of the Sadberge Renewable Energy Project was to encourage and facilitate the installation of solar PV systems in and near Sadberge in order to reduce carbon dioxide emissions and enable Sadberge residents to benefit from the financial returns offered by the Clean Energy Cashback Scheme.

## Approach

In the first phase of the project the Climate Change Working Group set up a bulk purchase scheme to enable Sadberge property-owners to buy solar PV systems at a good price.

However, the Climate Change Working Group also recognised that some Sadberge residents who would be interested in investing in solar PV systems did not have the necessary south-facing sloping roofs, while some Sadberge householders with suitable south-facing sloping roofs were not in a position to buy their own solar PV systems at the moment. The group therefore set up a community-based company – Sadberge Renewable Energy Limited – to use funds provided by Sadberge residents to install solar PV systems in and near Sadberge on a 'PV for free' basis. <sup>[1]</sup>



One of the solar PV systems installed via the 'PV for free' scheme

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<sup>[1]</sup> In a 'PV for free' scheme the company takes a long-term lease on the property's roof-space and pays for the installation of the solar panels, which remain the property of the company. The resident gets free electricity from the solar panels, and the company uses income from the Clean Energy Cashback Scheme to provide a financial return to the investors who have provided the funds.

Sadberge Renewable Energy Limited is a private limited company with some special provisions in its Articles of Association. Specifically, the directors will act on a voluntary basis and must be Sadberge residents, and each year the Board must consider whether to use part of the previous year's profits to fund renewable energy projects in Sadberge and/or make donations to community organisations in Sadberge.

In September 2011, 23 Sadberge residents each took an initial £10 stake in Sadberge Renewable Energy Limited. In November 2011 the company raised £72,000 from a share offer to its existing shareholders and borrowed an additional £52,500 from its shareholders and their families, giving it enough funds to install solar PV systems on thirteen properties in and near Sadberge.

Seven of the thirteen properties that have got solar PV systems through Sadberge Renewable Energy Limited's 'PV for free' scheme belong to Darlington Borough Council. This has led to a very satisfying win-win-win situation. The company's shareholders get a reasonable financial return and the satisfaction of helping their fellow residents, the Council tenants get some free electricity from the solar panels, the Council is making a contribution to reducing carbon dioxide emissions without having to pay for the solar panels ..... and everyone involved is doing something positive to combat climate change.



Five solar PV systems along Norton Road

### **Impact**

A total of 22 solar PV systems have been installed in connection with the Sadberge Renewable Energy Project. There are 304 solar panels, giving a combined maximum generation capacity of a little over 69 kW. According to data from the Energy Saving Trust web site, 69 kWp of solar panels on south-facing roofs should generate about 56,000 kWh of electricity in an average year, reducing carbon dioxide emissions by about 26 tonnes per year. The electricity generation and CO<sub>2</sub> emission reductions from the Sadberge solar PV systems will probably be slightly less than this, because some of the installations do not face directly south.

Eight property owners in and near Sadberge have bought their own solar panels in connection with the Sadberge Renewable Energy Project. These include:-

- 5 households in Sadberge village.
- One household in West Newbiggin.



- One farm close to the village.
- The Dogs Trust rehoming centre.

The Sadberge Village Hall Association has also bought a solar PV system for the village hall.

Sadberge Renewable Energy Limited has installed thirteen solar PV systems on properties in and near Sadberge. These include:-

- 7 Council properties in Sadberge village.
- 3 private properties in the village.
- One private property in Beacon Hill Bungalows.
- A farm shed in West Newbiggin.
- A farmhouse in West Newbiggin.



The locations of the 16 solar PV systems in Sadberge Village

### **Project philosophy**

Some communities have gone down the road of applying for grants to install solar panels. In Sadberge, we took a good look at the financial returns provided by the Clean Energy Cashback Scheme and said "We can do this ourselves".

*"Don't be afraid to go out on a limb. That's where the fruit is!" Will Rodgers*

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