

BUILDING SCHOOLS in the 21st Century



BSF report - Constructing Excellence in Wales - SEN schools
Nurture Future - pay as you go renewables - bespoke ventilation
The Bridge Academy - Albany Healthy Schools study

in association with

LOCAL AUTHORITY
BUILDING & MAINTENANCE

A total of 240 cells were mounted on a sports hall roof at Hertfordshire's Birchwood High School



Next generation

Funding and new cash back incentives can help to cushion the blow of capital outlay costs for renewable technology, however what about a scheme that requires no upfront payment but instead, a fixed energy cost, secure for years to come? Our Generation is a new organisation set up to deliver this proposition. Ian Goodwin explains.

Budgeting is an unpleasant word, in any walk of life, so for schools the idea of dipping, or rather digging into their pockets to fund something as extravagant as a 200 solar panels to go on the school roof, is simply out of the question. Or is it?

Forgetting the cost for a moment, investing in a solar photovoltaic (PV), or electric array as it is sometimes known, actually weighs up very well in the cost benefit analysis. Generating your own power (microgeneration) will see you not only reduce your reliance on the National Grid, saving you money on your energy bills, but also reduce your carbon footprint — something which has educational benefits, and scores green brownie points

with your local authority. So if you could have all the benefits of going green, but without the price tag, that has to be something worth considering.

This concept sparked the launch of Our Generation: An organisation focused on helping schools and other establishments realise the benefits of microgeneration technology, without having to raise the cash. The concept is simple — you pay as you go. Instead of spending thousands of pounds on the system and its installation, Our Generation will agree a fixed energy tariff with a school for say, 25 years. This means schools pay Our Generation for the electricity generated by the PV array and in doing so, know

that the costs are stable and will not fluctuate as they would through a traditional energy provider.

The proposition does not stop there however; the organisation will soon be launching a package of lesson plans, supported by the National Curriculum, which will help students understand how microgeneration technology works. Fantasy Energy Leagues is another concept it is developing, whereby students pick their teams from a range of renewable technologies. Or there are other activities, including essay and inter school competitions — all designed to engage and educate the next generation, on the technology we have at our fingertips.

Renewable Energy

Largest solar PV array on a UK school

Working with installation partners, Mark Group, Our Generation completed the largest solar PV array on a school anywhere in the UK. A total of 240 cells were mounted on a sports hall roof at Hertfordshire's Birchwood High School in September 2009 — capable of providing enough power to serve 10 average-sized houses. The array generates around 7% of the school's requirement, cutting its reliance on the National Grid from 600,000 kWh of electricity down to 565,000kWh, but it has served as a wake up call for the school — making staff and students alike realise just how much energy they are using and wasting on a daily basis. In fact, the school has signed up to the Government's 10:10 plan — making a commitment to generate 10% of their own electricity, by cutting the amount of power they use across the school.

The installation at Birchwood could not have been easier. A two-year old sports hall roof was the site for the array, having a modern, standing seam construction which was compatible with the mounting rails for the PV panels. The array was installed within just two weeks, just tipping in to the start of the autumn term. However, along with Mark Group, Our Generation worked very closely with the school to ensure disruption was kept to a minimum, and that there was no contact between the technicians and pupils.



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Will solar work for me?

There is a bit of a north, south divide when it comes to solar energy — it is no secret that the south coast of England gets far more sunshine, than the north coast of Scotland. We are already talking to a large number of educational establishments in the south — some with west-facing roofs, or constructed from a variety of different materials, proving that it is certainly not a case of one size fits all.

Birchwood High School was a first class project — a large south-facing roof (crucial for maximum light intensity), modern construction and above all else, a management team that was keen to get behind the concept of microgeneration. Solar PV is not suitable for everyone, but 90% of the

time Our Generation will be able to work with schools and local authorities to find a suitable solution. Planning approval is required, but the longest delay that the company has encountered to date has been two months, so not long in the wider scheme of things.

It also really encourages establishments to set up a 'Power Purchase Agreement' with the organisation. This means that the company takes all of the risk on its shoulders, ensures a stable price for the school, is responsible for maintaining the asset and pays all of the structural survey fees. In short, making life easier.

In five years' time, microgeneration will be widespread. The Government has tough targets to meet for the reduction of carbon emissions but the good news is that incentives and schemes are just beginning to come to fruition, to drive the change that is needed. Today, schools are being built with the environment front of mind and young people are already streets ahead of the majority of the adult population in their knowledge of green technology. So, as the decision makers responsible for delivering the adoption of microgeneration, we need to face up to our responsibilities and act now.

■ Ian Goodwin is director of Our Generation

To find out how Our Generation could help your school visit www.ourgeneration.org.uk or please mark Readerlink 173

