

South Wolds Community School

Carbon survey helps school make the case for local authority funding

Without funding for new premises, South Wolds Community School chose to focus on becoming more energy efficient within its existing set-up. A Carbon Trust carbon survey set it on the right track.

Having used this to upgrade lighting, reconfigure the heating system, introduce more efficient computers and launch an awareness programme, the school expects to save £34,000 a year on its energy costs, at today's prices.

The business case

When South Wolds Community School was built in 1967, as a CLASP (Consortium of Local Authorities Special Programme) construction, the priority at the time was to meet the need for new, affordable school buildings. Forty years later, the school felt it was time to revamp the existing building to meet 21st century standards of efficiency.

Double-glazing and new roofing, both long-term rolling projects, have, over time, improved its infrastructure. But after the school's agreement with its energy supplier went beyond its fixed term, its energy costs rose by 125%. The rise in ICT equipment meant the school's demand for power was also rising. When the energy bill reached £67,500 a year, it was time for a coordinated approach to energy saving.

South Wolds was already familiar with the Carbon Trust, having used our promotional materials to communicate energy efficiency messages for several years. So when the school decided to aim towards an Eco Schools Award, a Carbon Trust carbon survey was the obvious place to start.

Securing funding

An extra advantage of the carbon survey was that the results gave the school the level of accurate data required to approach the local authority for the funding to put our recommendations into action. "The survey data dovetailed into our local authority funding forms, and the fact that we had independently approached the Carbon Trust to kick-off an action plan really strengthened our cause," added School Services Manager Phillip Dack.

Contributing £17,500 itself, the local authority matched this with the same amount through the Salix Energy Efficiency Loan scheme – awarding the school a total grant of £35,000 to upgrade the lighting. By the same arrangement, the school received a second loan of £63,000 to put in place a new computer system.

As a result of the changes made since the survey, the school expects to see a return of £34,117, and save 324 tonnes of CO₂. These savings are reinvested into other energy efficiency projects at the school, generating further savings.

Savings at a glance

- Local authority grants (inc. Salix): £35,000 and £63,000
- Cost savings to date: £34,117
- CO₂ savings to date: 324 tonnes

Save without the spend

The key element of our advice was for South Wolds to develop an energy policy, supported by a series of presentations, to ensure that all staff and students are fully aware of the impact of how they use energy.

By focusing on simple behavioural changes, such as switching off lights, computers, photocopiers, projectors and kitchen equipment, this policy alone should save the school £3,717 a year.



Actions taken

As well as making good use of the grant, the school was keen to focus on quick wins that didn't require an initial capital outlay. So changing behaviour and attitudes has been central to the new approach.

"It's a question of getting people out of bad habits," says Phillip. "For example, the electronic whiteboards have a strong beam, yet teachers used to always close the blinds and turn the lights on, even on sunny days. But the projectors are bright enough to cut through daylight so you don't need to do that – it's about getting people to think about things slightly differently." Phillip expects these simple behavioural changes to save the school £4,000 on its annual energy costs.

Lighting

Following another of our recommendations, the school has upgraded its lighting systems in many buildings. It has also reconfigured the tube lighting in recently installed fittings, so that the energy use is halved, at no cost.

The new lights are fitted with daylight sensors, so they automatically switch off when there is enough natural light, as well as motion sensors, which turn them off when there is no one moving around. This initially caused teething problems in the library, where people remain still for long periods, as lights kept going out when students were working. But after giving greater consideration to what spaces are used for, the school fitted appropriate forms of lighting to each area.

These improvements to the school's lighting should see its energy bill reduced by around £14,000 a year.

Salix Energy Efficiency Loans

The Salix Energy Efficiency Loans Scheme provides funding for public sector organisations who want to invest in energy saving measures and technologies.

Set up as an independent company in 2004, by the Carbon Trust, Salix works with local authorities, NHS foundation trusts, higher and further education institutions and central government – enabling them to improve their energy performance and reduce their carbon emissions.

“Our plan is to reduce our consumption first by challenging our current ways of working and addressing energy loss through the fabric of the building. When we have nailed that down we’ll look at ways of becoming more self-sufficient by generating our own power.”

Phillip Dack, School Services Manager,
South Wolds Community School

Heating

The original heating system is centrally, rather than zonally, controlled. So a change in one area affects the rest of the school, regardless of whether it’s needed elsewhere. On our advice, the school is reconfiguring the pipework, and will then fit centrally controlled valves, so that heat can be directed where it is needed.

The school currently has two boiler houses with a total of seven gas boilers. Although these are all less than a decade old, the school hopes eventually to replace them with more efficient models.

Under the new energy policy the temperature in the school has also been turned down by two to three degrees, which significantly lowers heating costs without making the building noticeably colder or less comfortable.

Staying connected

Following the same vein of energy efficiency, 200 of the school’s 270 PCs have so far been swapped for thin client network stations – meaning that all processing is done by a central server rather than by individual machines.

This not only reduces the power consumption per computer from 112W to 7W-8W, but also means that no heat is given out as a result of processing, removing the need for air conditioning in the computer rooms. Taking the direct and indirect benefits of this new set up into account, the school expects to see an annual saving of £17,000.

Forward thinking

The Carbon Trust’s recommendations were a key factor in persuading Nottinghamshire County Council of the need for funding to put the efficiency measures in place. The school’s governors are also supportive of the new focus, and sustainability is now embedded in the school’s improvement plan – ensuring that it is considered as a primary factor in every project.

South Wolds’ current emphasis is on reducing the amount of energy lost – both by educating staff and students, and by improving the school’s insulation through double glazing, funded by the local authority. The school also plans to invest in better roofing and pipe lagging to further retain heat.

When energy waste has been cut as much as possible, the school plans to explore the possibility of generating its own power through a wind turbine.

Salix: 2009-2010 scheme

With the 2009 Budget announcing extra financial support for public sector energy saving projects, Salix will be providing over £50 million’s worth of interest-free loans during the 2009-2010 financial year.

Unlike previous years, where any funding had to be matched by the applicant and savings reinvested in other energy saving projects, loans will cover the full cost of the project and recipients need not contribute themselves.

The loans will be repayable over four years, and are on a first-come-first-served basis, until funds run out.

To find out more, please visit www.salixfinance.co.uk/loans.html

Note: these terms will only apply to loans during the 2009-10 financial year, and will not affect anyone already on the scheme.