

SEE – Savings; Schools Energy Efficiency Savings project Lancashire County Council

Background

Over 50% of Lancashire County Council's carbon emissions (as measured under NI 185) come from the county's 633 schools. As schools have devolved financial management it has been difficult to influence reductions in emissions. This project targeted schools with a low F or G rating in their Display Energy Certificate, rather than those with an existing enthusiasm for energy management to ensure that larger schools with high energy use are the focus of activity.

Outline Methodology

The project was delivered by County Council Energy Engineers. 6 schools were invited to join the project, and all those invited agreed.

The engineer undertook initial readings of electric meters followed up with a second reading four weeks later, establishing a base consumption pattern early in the Autumn term 2010.

The main delivery of the project was initiated with a meeting with the school management to explain how to read meters and the method for recording the data. This included the introduction of a check sheet whereby children regularly monitored usage and recorded behaviour such as leaving lights on. A site visit was made by an engineer to investigate heating control settings and make adjustments where necessary. Most of the schools received a visit from an engineer with one school feeling this was not necessary for their sites.

Ongoing meetings were held with each school to monitor progress and to answer queries as the project progressed.

Delivery of an eco-awareness seminar by Groundwork Pennine Lancashire to motivate the teachers and pupils involved in the project

Results and conclusions

An initial reduction in energy use was seen in all participating schools, but old habits then reassert themselves and so this is not sustained. The study was not long enough to see savings conclusively.

Overall whilst the project was greeted with enthusiasm by the schools, the results were mixed and highlighted that the need to run the project over a longer period.

Further, whilst there was some evidence that the project resulted in some initial falls in consumption the momentum required to sustain this was difficult to maintain and highlighted the need for a high degree of motivation in those involved. A High School recorded a dip in consumption in the initial two weeks following the start of the programme, but the usage pattern returned to normal shortly after.

Key lessons learned

The approach was tailored by the Energy Engineers for each school. Although this ensured that the needs of each school were met, it makes comparison between the projects more challenging. For consistent monitoring of impact a standardised approach would be required.

Poor energy performance can be a result of poor infrastructure with schools having antiquated heating systems and minimal energy efficiency measures installed. It can also be a result of poor management of the systems that exist, or a combination of both these. The good housekeeping focus of this project meant that only the latter aspect could be addressed. Where infrastructure is particularly poor there is a noticeable reluctance to address the housekeeping as there is a perception that nothing can change without improvements to the building.

Sustaining momentum is difficult. Constant encouragement and contact is necessary to sustain effort and monitoring. The feedback loop needs to be maintained. The success of the project, falls in consumption and associated savings made need to be fed back to the staff involved, otherwise the project loses momentum and the reason for continuing is forgotten.

Support from the head teacher is crucial to the success, and projects were more successful where the head lead the work than when this was delegated to another member of staff.

The review of heating controls resulted in significant changes to settings in some schools. However, one school with an enthusiastic site supervisor who was already actively managing the building controls refused this offer of assistance, regarding it as interference in his area of responsibility.

Whilst the children involved very much enjoyed their involvement, they need the support of the teaching staff to maintain their enthusiasm

High schools, due to their size and complexity, have greater difficulty in running initiatives. Success in these organisations can only be achieved with full commitment throughout the whole school structure.

It is important for local authorities to be realistic about the amount of time and effort a school can devote to managing its energy. Schools have many other priorities, and these can easily prevent a focus on energy efficiency. Where schools have other priorities, particularly if they are at risk of going into Ofsted special measures, it is unlikely that they will sustain participation in this kind of activity. This was borne out by one of the participating schools failing to complete the programme owing to just such a scenario developing.

Future developments

Lancashire County Council has provided energy management advice on a reactive basis through the schools energy club for more than a decade since schools finance was devolved. More than 300 schools participate in this service, and many have already achieved significant reductions in energy use. The experience gained from this project has informed the redevelopment of the Schools Energy Club. Key developments include the provision of regular feedback on energy use through the monitoring and targeting software system, and an onsite log book, which includes the energy check sheets used in the project.

The energy engineers will also be continuing to offer heating control checks to members of the Schools Energy Club, and will provide training to site supervisors on request.

Contact for Further Information

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