

Energy Reduction in Rochdale Schools

Final Report

1. Project Background

In 2010, Rochdale MBC approached the North West Climate Change Local Area Support Programme for funding to develop and deliver a pilot energy project in partnership with CREATE, an independent energy education charity, which would:

- improve the performance of schools' monitoring and targeting of energy consumption
- develop bespoke strategies to help reduce carbon emissions in schools

A steering group representing CREATE, the local authority's Education Services, Sustainable Development and Natural Resources Division and its arms length facilities management team IMPACT met in St Albans House in Rochdale on 27th September to agree project outcomes, identify specific roles and decide the criteria for the selection of schools.

The project outcomes agreed were:

- To identify examples of improving practice that could be disseminated to other schools and local authorities across the North West region
- To capture data that would show a reduction in carbon in schools
- To promote the tools available to schools provided by the local authority
- To obtain feedback from schools on how the carbon reduction message could be best 'sold' to schools

2. Delivery of the Work Programme

Five primary schools across the Borough were selected by Rochdale's Education Services based on their poor DEC rating and their willingness to get involved in the project. These were:

- Sandbrook Community Primary School
- St Mary's RC Primary School
- Belfield Community Primary School
- Parkfield Primary School
- Meanwood Community Primary School

A half day visit to each school was arranged in November and carried out by CREATE with the purpose of:

- Meeting the key contacts
- Outlining the aims and purpose of the project
- Agreeing the individual outcomes
- Gathering data about the school's current energy management and monitoring procedures
- Identifying the main drivers in the school and how these can be used more effectively
- Conducting a walk-round energy audit
- Ascertaining the level of pupil and staff energy behaviour in school
- Agreeing an action plan to reduce carbon emissions by June 2011

Following this visit, a bespoke action plan was produced for each school and delivered by CREATE between January and June 2011. Such actions included:

- Establishing an energy monitoring system to help school management and pupils record weekly meter readings and analyse energy consumption.
- Illustrating how the 'tools', such as the web reporting system, that are available to those schools that have signed up to the local authority's Energy Management Service Level Agreement can assist school staff to manage their energy use in school. This included setting realistic targets for energy and carbon reduction as part of their energy policy and action plan.
- Working with the school's Eco group to conduct an energy audit of the school.
- Identifying measures that can be taken to reduce carbon emissions, including the implementation of a 'Switch Off' campaign over one week in school.
- Analysing the results of their electricity saving actions and, if savings have been made, rewarding and celebrating success.
- Demonstrating a range of energy saving activities that teachers can use to increase pupil and staff awareness and provide evidence towards achieving the energy component of the Eco Schools programme.

In addition, CREATE delivered four workshops for teachers, funded separately by Rochdale MBC, which demonstrated to other schools, not involved in the pilot, how energy as a topic is cross curricular and provided examples of how energy as a theme can encourage home, school and community linking. An electricity cost monitor was purchased by Rochdale MBC and presented to schools involved in the workshops to help staff and parents identify those home electrical appliances that use most energy. The intention is for this data to be made available in school for pupils to extend their learning by drawing comparisons with electrical use in school.

3. Outcomes Realised

The following outcomes were realised from the £6,000 pilot project (equating to a cost of just over £5 for each pupil and adult involved):

- An energy project was developed and implemented in four of the schools; the fifth school was unable to continue with the project due to staffing issues, releasing extra time for the other participating schools.
- A total of 482 kWh and 263 Kg of CO₂ were saved during the school Switch Off Campaigns
- Thirty six pupils increased their awareness of school energy efficiency by directly participating in the Eco Group initiatives
- Over eleven hundred pupils learnt about the importance of energy saving in school through pupil-led assemblies

In addition forty seven teachers representing thirty schools increased their understanding of energy issues and received teaching resources that will help their schools reduce carbon emissions.

4. Considerations for Replication

From the pilot, it is proposed that local authorities wishing to implement a similar programme of work in their own schools should consider the following:

- **Schools are not the same.** They work in different ways, can have different management structures, staff responsibilities and levels of communication so one size does not fit all. Adopting a flexible approach is therefore essential if schools are to be encouraged to 'buy in' to your project. Getting to know your schools personally and the way they work may be time consuming at the beginning, but can avoid incorrect assumptions being made later on leading to a feeling of frustration on both sides.
- **A long lead in time is required** for the development and implementation of energy projects with schools as projects may take up to a whole school year to implement and show results.
- **Political change**, both nationally and locally, will have a huge impact on the outcomes and achievements of any project. Funding for this project was granted just before the Government announced the local authority spending review in the Autumn. This led to an intense period of increased concern and speculation over job security and low staff morale within the local authority. With the prospect of staff redundancies and budgets being cut in schools and local authorities, the project stalled for several months in terms of active local authority involvement with the schools.
- **Establishing and maintaining effective communication** channels with schools is of paramount importance particularly when setting up arms length organisations to help facilitate energy services to schools. Schools need to feel that they are consulted on energy matters that directly affect them and that they know who they need to contact when problems arise.

- **Identifying the individual drivers** that encourage schools to get involved in energy projects is the key to 'selling a carbon reduction project' to schools. Not all schools are motivated by reducing their energy bills and saving money. From the pilot, other drivers included improving the school's DEC rating and providing a meaningful project for the Eco Group to develop and to involve the whole school in practical action.
- **A diverse group** of children and young people, ranging from the most gifted to the most challenging, will be able to participate in an energy project as energy saving activities can easily be differentiated to suit all abilities.
- It is important to ensure that schools recognise that **small efforts can make changes**. For example, although the energy saved in the Switch Off campaigns in the pilot was relatively small, schools could see that by switching off unnecessary lights, computers and interactive whiteboards when not in use, saving in energy and carbon emissions were made without much effort. Maintaining these savings over a whole year can provide meaningful benefits.
- **Gathering energy data and monitoring consumption** on a regular basis tends not to be a priority in most schools. In many schools, it is the caretaker's responsibility to record the meter readings and in some cases this happens very much in an ad hoc way. Reading energy meters on a regular basis enables schools to see how much energy is being used and highlights appropriate action which can immediately be taken to reduce energy consumption. Schools therefore need to be encouraged to carry out this good practice and not have the responsibility taken away! This is an important factor to consider when installing remote meter reading equipment in schools as a way of capturing data for local authority and energy supplier purposes. In the pilot schools, AMRs were installed towards the latter end of the project leading to some members of the school management team convinced that they no longer needed to concern themselves with energy matters as their 'Smart Meter' would help them save energy. Training is required so schools are aware of the purpose and function of the new technology so misconceptions do not occur and information provided by the new meters can be used to encourage and monitor energy savings.
- **Good work** around carbon reduction is happening in schools but seldom do staff have the time to gather the evidence in one place to upload onto external websites such as Eco Schools so they can get recognition for the work they are doing. In some cases, this can lead to a wane in impetus. It was evident from the pilot project that when schools are supported, it does help them to refocus their efforts. For example, one school involved in the pilot was able to use the energy project to resurrect their Eco Club and now is not only working on the energy component of Eco Schools but also on the healthy eating and recycling themes too.
- **An important finding** from the pilot project is that schools still require a certain level of support and direction if the lead person in the school does not have the sole responsibility for the implementation of energy/carbon initiatives. Hands-on facilitation is still needed by the local authority and external agencies if actual carbon savings are to be realised.

Contacts for Further Information

Sandy Carter

Project Manager, CREATE

<http://www.create.org.uk/>

Barnaby Fryer

Team Leader – Sustainability & Climate Change

Barnaby.Fryer@rochdale.gov.uk

01706 92 2047