

Open Report on behalf of Executive Director for Environment and Economy

Report to:	Lincolnshire Schools Forum
Date:	8 October 2014
Subject:	School Collaboration on Resource Efficiency (SCoRE) update

Summary:

The report provides an update on recent activity.

Following the agreement of the Forum the Schools Collaboration on Resource Efficiency (SCoRE) takes a whole school approach and supports schools in reducing their energy bills and spend, providing financial and educational benefits. 135 schools have already completed the programme and it is planned to continue at a rate of 30 schools per term.

In addition to behaviour change the programme provides investment in proven technologies and supports schools in taking a strategic approach to investing in energy efficiency.

Analysis of evidence shows that SCoRE schools reduce their energy consumption by 8% on average through the behavioural element of the programme. Average benefits from the technology installations are in the order of 10%. It is too early to be definitive about the overall reductions in energy consumption and bills achieved. Where schools have wholeheartedly adopted the SCoRE approach significant benefits have accrued. There are examples of schools that have reduced consumption by over 50% and others that, when FIT income is taken into account, cover their energy costs.

Automatic metering has been put in place wherever possible and data is now available and visible. Monthly reports are sent to schools showing gas and electric consumption.

Programme spend is in line with agreed profile.

The programme has won national recognition in the Green Apple Environmental Awards.

Actions Required:

That progress is noted and further update given in October 2015.

1. Background

1.1 The SCoRE programme (Schools Collaboration on Resource Efficiency) provides support for Lincolnshire's schools to reduce energy consumption and bills. In addition to the financial benefits it provides significant educational benefits. Diagram 1 shows the benefits identified by teachers and pupils at Celebration Events (the larger the word the more often it was identified).



Diagram 1

The programme is funded through from DSG underspend. The programme works with geographic clusters centred on a secondary and their key feeder primaries and started in January 2013. 135 schools have so far completed the programme (Appendix A). The latest SCoRE background briefing and autumn newsletter are appended to the report (Appendices B and C).

There are three strands to the programme

- Behavioural and low cost savings
- Strategic investment in boiler room improvements
- Supporting investment identified in action plans in proven technologies

1.2 Investment in energy efficiency technologies.

The procurement process establishing Frameworks for boiler optimisation and boiler room insulation is complete and implementation started in SCoRE schools in the September 2013. This investment is carried out at no cost to the individual school. Evidence to date shows boiler optimisation achieving average savings of 10% (see case study in Appendix D). Given that the programme is in its early

stages savings will accelerate. In response to the views of the Schools Forum the boiler optimisation and boiler room insulation programmes will be accelerated with the aim of completion by July 2015.

As part of their work schools put together an action plan which details investment opportunities and their business cases. SCoRE facilitates that additional investment through a number of routes. Guidance has been prepared to assist schools. Maintained schools can access the Council's Salix Revolving Fund and Capital loans (which can be used for solar PV). The guidance also provides advice for academies on sources of investment funds. To date £875,228 has been invested in schools from the revolving fund, providing annual reductions in base costs of £176,212.

In addition schools have been supported in implementing solar photovoltaic schemes which generate electricity, again reducing energy costs but also providing revenue streams. Maintained schools can use LCC Capital Loan scheme and other schools have been supported to find other sources of finance.

1.3 Automatic metering, monitoring and targeting.

It is important to recognise that installation of the automatic meters will not itself reduce consumption and save money. To be effective schools need to understand what the data is telling them and to act on it. Part of the SCoRE activity in schools provides training and understanding on how the data can be understood and acted upon. As they participate, schools will receive energy reports monthly. Those reports go to head teachers, Chair of Governors and relevant contacts identified during SCoRE work.

1.4 Performance

With the programme entering its third year it is possible to provide more reliable data on performance and results. It should be recognised that, given the staged programme and the time it takes to install energy saving technologies, there is a time lag before actions translate into savings. Longer term analysis will be more robust and expected to show a higher level of savings.

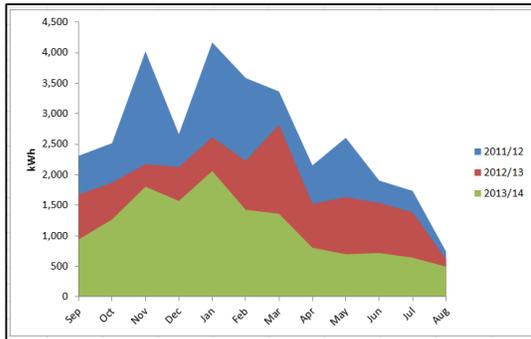
Analysis of national trends (1997-2012) shows a reduction in energy use in schools. Fossil fuel consumption within primary and secondary schools has fallen in that period by 29%. However, electricity consumption has suffered from 'load creep' and has increased by 57% in primaries and 70% in secondaries from 1997 to 2012. This yearly increase in electricity consumption from 1997 to 2012 is in the order of 3.8% for primaries and 4.7% for secondaries. Performance of Lincolnshire schools and the savings achieved through SCoRE should be considered against this background.

In the case of Lincolnshire schools there is clear evidence that those schools that have participated in SCoRE have reduced energy consumption significantly more than those yet to do so. SCoRE secondary schools have reduced electricity consumption by 2.7% and Primary Schools by 6.3%.

At individual school level there is evidence that, where schools embrace the SCoRE philosophy and exploit the opportunities open to them, remarkable results can be achieved.

For example, Scampton primary school took part in the SCoRE programme during summer term of 2013. Pupils quickly identified energy saving opportunities; ranging from installing timers for hot water heaters and laptop charging trolleys, to moving furniture obstructing heaters and even draught proofing leaky doors. The behavioural changes in the school were strengthened by the pupils' awareness raising campaigns, resulting in a reduction in electricity consumption across Action Week of 8% from Monday to Friday, compared to the week preceding it. An LED lighting upgrade, including changing the fittings, took place at the school and was commissioned in September 2012. During the same period the school had boiler load optimisation unit fitted to their one boiler and in late 2013 a 10kWp Solar PV system was fitted to the roof of the school.

Electricity Savings



As a result of their actions and investments the school achieved a **56.6%** reduction in electricity consumption (September 2011 to August 2014). Gas consumption has reduced by **11.1%** (2012 to 2013).

In February 2014 at William Farr a project was started to upgrade the school's lighting to LED, including changing the fittings, as well as a 50kWp Solar PV system being installed onto the roof. The two projects were completed by the end of March 2014. As a result the school has seen a **35.5%** reduction in electricity consumption (February 2013 – August 2013 compared to February 2014 - August 2014).

Appendix D provides more detailed analysis for both schools and other case studies.

2. Conclusion

The SCoRE programme is making good progress with good levels of participation and significant savings made through quick wins and action weeks. Programme spend is on profile. Despite regrettable delays monthly consumption reports have been made available to participating schools and will soon be available to all schools with enabled meters. Boiler optimisation and boiler room insulation work is on track and all schools seem to be happy with their installations.

Whilst virtually all schools participating in SCoRE have reduced their consumption compared to business as usual trends, those schools that have adopted the SCoRE philosophy and made use of the investment opportunities available have achieved substantial reduction of their base energy costs. Given that energy costs are one of the few budget headings over which schools have control this is effort well worth making.

3. Consultation

a) Policy Proofing Actions Required

n/a

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	SCoRE schools
Appendix B	SCoRE Newsletter Autumn 2014
Appendix C	SCoRE LCA Newsletter Autumn 2014
Appendix D	SCoRE Case Studies

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

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