

Energy Efficiency Services for Schools and Academies

Central
Bedfordshire

Schools' Carbon Reduction Action Plan (SCRAP)

The Schools' Carbon Reduction Action Plan (SCRAP) has been in delivery since 2011 and has been designed to offer support to schools and academies in reducing energy use, reducing carbon emissions and reducing utility bills.

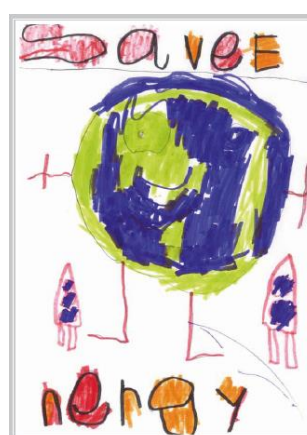
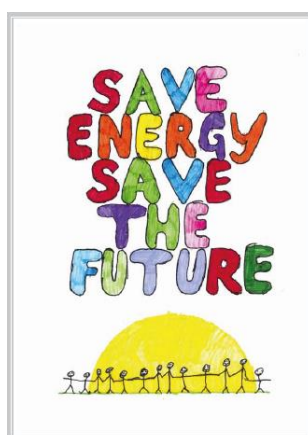
We recognise that schools and academies are extremely busy places and having the time to focus on energy efficiency can often be hard to find. Furthermore, advice on energy efficiency can often be confusing or complex, requiring further time to be dedicated in order to understand the best opportunities for a site.

The SCRAP has therefore been developed to assist schools and academies by providing a set of services to cut through the general advice and identify site specific opportunities and support for each site that chooses to engage with the program.

Each site is different and has its own specific set of challenges regarding energy efficiency. The program of services on offer has been developed since 2011 to provide the most relevant support to each site. The services are adaptable to ensure site specific issues can be identified and overcome. The level of support can vary therefore depending on the level of energy efficiency opportunity.

It is the choice of the school or academy as to how much involvement they want from the SCRAP. The services have been designed to vary support levels depending on the requirement. It should be noted that sites that have the greatest success are those that engage the most with the program. Ultimately schools and academies have the autonomy to make decisions regarding energy efficiency at their own sites and the SCRAP is there as a support function.

All schools and academies that have used the SCRAP have made efficiency savings. The level of savings vary at each site, however efficiencies always lead to reductions in overhead costs so there is a financial benefit of taking part. Some schools and academies go further and use the SCRAP to engage their pupils in energy efficiency and carbon reduction. There are many curriculum applicable actions that pupils can get involved in and opportunities such as Eco Councils can support pupil development through extra curricular activities.



For more information or to access the services included in this document please contact:
Schools' Energy Officer – schools.energy@centralbedfordshire.gov.uk

1) Energy Audit, Report and Action Plan

This is the recommended starting point for a school or academy choosing to engage with the SCRAP program. The Schools' Energy Officer will dedicate a specified amount of time to supporting your site understand the best opportunities available for energy efficiency. Details Below;

Background Research

The service includes some time prior to any visit researching existing documentation held by us and other available information to understand the background to your building(s), any past works and future plans for the site.

Energy Audit Site Visit

The Schools' Energy Officer will contact you to arrange for a visit to conduct an energy audit at a time/date that is convenient to the site. The Audit itself will take between 1 – 2 hours and will require onsite support to provide access. Following the audit the Schools' Energy Officer will spend some time going through initial findings with the site team

Energy Audit Report and Recommendations

Following the Energy Audit the Schools' Energy Officer will produce a bespoke report detailing findings and opportunities for energy efficiency. Included within this report will be practical ideas and suggested contractor contacts for any potential investment.

Action Plan

As part of the energy audit report the Schools' Energy Officer will complete a suggested action plan with suggested next steps for the site. The Schools' Energy Officer will work with the site to agree the action plan, responsibilities and timescales. Some actions will be the responsibility of the site to complete; other actions will be the responsibility of the Schools' Energy Officer.

Ongoing Support

The Schools' Energy Officer will follow up the action plan to support your site through delivery. After a period of three months from receipt of the energy audit report the site can choose whether further support is required and further rates can be negotiated.

2) Smart Metering and Data Analysis

One of the most effective ways of managing energy with a view to finding and delivering efficiencies is through effective data analysis of energy consumption. This is driven through smart metering.

Smart Meters:

Also known as Automatic Meter Reading (AMR), Smart Meter is the name for the technology that monitors the half hourly consumption of gas and electricity at a site. This can provide a very accurate and detailed understanding of when energy is used at a site. If your site already has smart metering then you can access the data analysis service below. If your site is yet to benefit from this technology then the SCRAP can help by managing the install and service contract to get your site set up. You will benefit from the savings of the larger purchasing contract that we will pass onto your site.

Data Analysis and Training to use software:

Once you have Smart Meters installed the Schools' Energy Officer can provide data analysis of your site's energy consumption. As part of this service the Schools' Energy Officer will identify opportunities for savings and make recommendations how your site can be managed more efficiently from an energy consumption perspective. Further support includes training on how to use the data analysis software so that you can interrogate your data yourself, set KPI's and engage the wider site with Energy Efficiency.

3) Investment Support, Energy Purchasing and Bill Validation

As part of the other services, the Schools' Energy Officer may well identify parts of your site that could benefit from investment to improve energy efficiency. You may have already identified areas that you would like further support from;

Investment Support

The Schools' Energy Officer can help signpost you to funding opportunities from government programmes and charities. Should you wish to pursue these funding opportunities the Schools' Energy Officer can also provide consultancy support through the application process to give your site the best chance of securing funding.



Energy Purchasing

If you are concerned that your energy purchasing contract is not up to date or that you are not receiving the best deal then the Schools' Energy Officer can provide advice as to the best deals available and should you wish, include your site in the our energy procurement program so that you may benefit from lower prices resulting of being part of a larger energy buying consortium.

Bill Validation

You may be concerned that your energy bills do not reflect your energy consumption, or you may have specific queries regarding your energy bill that you are struggling to find answers to through your supplier. The Schools' Energy Officer can utilise their expertise to provide consultancy support on energy bill related queries.

4) Pupil Workshops, Teaching Resources and Eco Schools

If you would like to engage your pupils with Energy Efficiency, Carbon Reduction and Environmental Awareness then the Schools' Energy Officer can provide a wide range of services tailored to your school to help deliver this. Sites that engage their pupils make the greatest progress; pupils and teachers often enjoy the opportunity to apply elements of the curriculum to practical energy related activities at the site.

Pupil Workshops and Teaching Resources

The Schools' Energy Officer can provide bespoke workshops and assemblies on Energy Efficiency, Carbon Reduction and Environmental Awareness for your pupils. The Schools' Energy Officer will work with you to design the workshop that you want and then deliver it. These workshops have been extremely popular in the past and have been used to kick start energy efficiency or eco awareness projects at a site. Particularly popular examples include workshops on energy efficiency that culminate in pupils producing their own adverts to be broadcast around the school showing practical advice on how to save energy, and assemblies covering the sources of energy and why we need to conserve the natural environment.

Alongside the workshops, participating sites can access the SCRAP teaching resources which include the 'Energy Bike' - that works as an exercise bike whereby pupils can power different appliances themselves – and other practical resources around energy generation and efficiency. All resources come with suggested lesson plans.

Eco Schools

Should your site wish to become registered with the nationally recognised Eco School program then the Schools' Energy Officer can provide advice and support for achieving accreditation. This includes access to materials and advice on the best practical steps to take in order to achieve the coveted 'Green Flag' Eco Schools status!

SCRAP Services Pricing List

SCRAP Service	Cost
Energy Audit, Report and Action Plan	<ul style="list-style-type: none"> £325 (Includes access to support for three months)
Smart Metering and Data Analysis	<ul style="list-style-type: none"> Smart Metering: £110 annual data hosting Fee Data Analysis: £100 starting rate with a choice to expand if required Software Training: £65
Investment Support, Energy Purchasing and Bill Validation	<ul style="list-style-type: none"> £130 starting rate with a choice to expand if required
Pupil Workshops, Teaching Resources and Eco Schools	<ul style="list-style-type: none"> Workshops: £170 per workshop Resources and Eco School support: £65 starting rate with a choice to expand if required

A detailed breakdown of rates is available on request

The SCRAP program aims to identify energy savings that would more than recover the cost of services within the first year. This cannot be guaranteed as each site will need to be assessed however past experience shows cost recovery to be highly likely.

Case Study: Caddington Village School



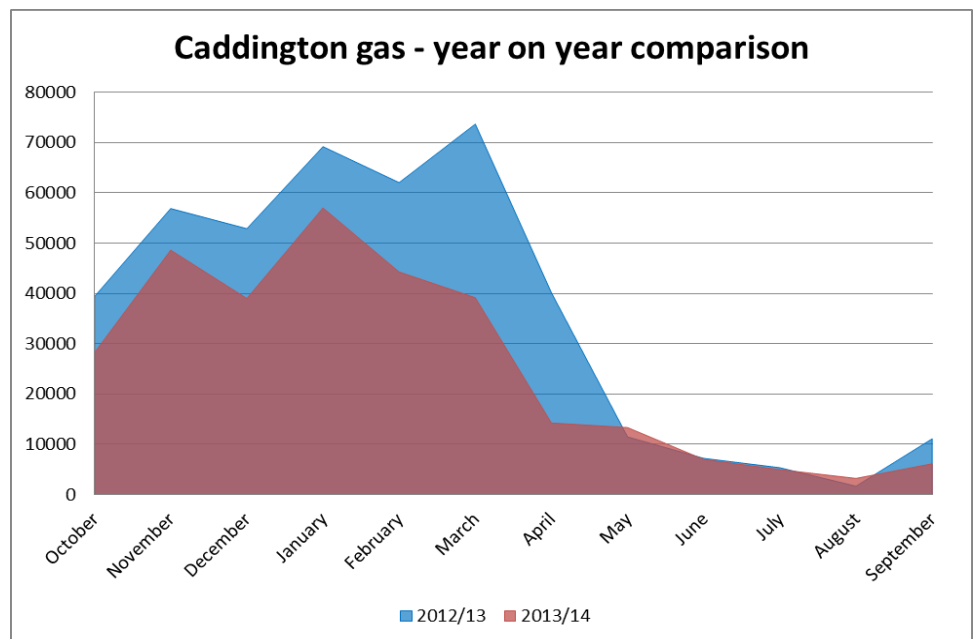
Caddington Village School have made significant savings on both their gas and electricity bills due to a host of complimentary actions delivered as a result of engaging with the SCRAP program . This has created financial savings that have been reinvested to create further carbon reduction.

The school has achieved this reduction in energy consumption by adjusting opening times and ensuring the boilers are on much stricter timing controls. This resulted from engaging with the SCRAP energy Audit and data analysis service. By utilising SCRAP services the school has completely reorganised its heating and electricity services resulting in a 30% decrease in energy consumption from the baseline.

The savings made against the energy bills have been reinvested through the installation of energy efficient T5 and LED lighting as well as installing movement sensors to the lights, thermostatic controls to radiators.

The school has taken advantage of several funding opportunities managed through the SCRAP program to invest in two Solar PV schemes that mean the school is now producing its own renewable electricity.

Caddington gas - year on year comparison



The pupils have got involved as well, by creating an eco council, by taking responsibility to turn off unused equipment, and even through making their own "Hippos" to reduce water consumption. The school recently achieved Green Flag status against the national Eco School award scheme.

This is a great example of a school utilising the SCRAP services, investment, behaviour change and pupil involvement to see a real financial and ecological benefit through energy efficiency – well done!

