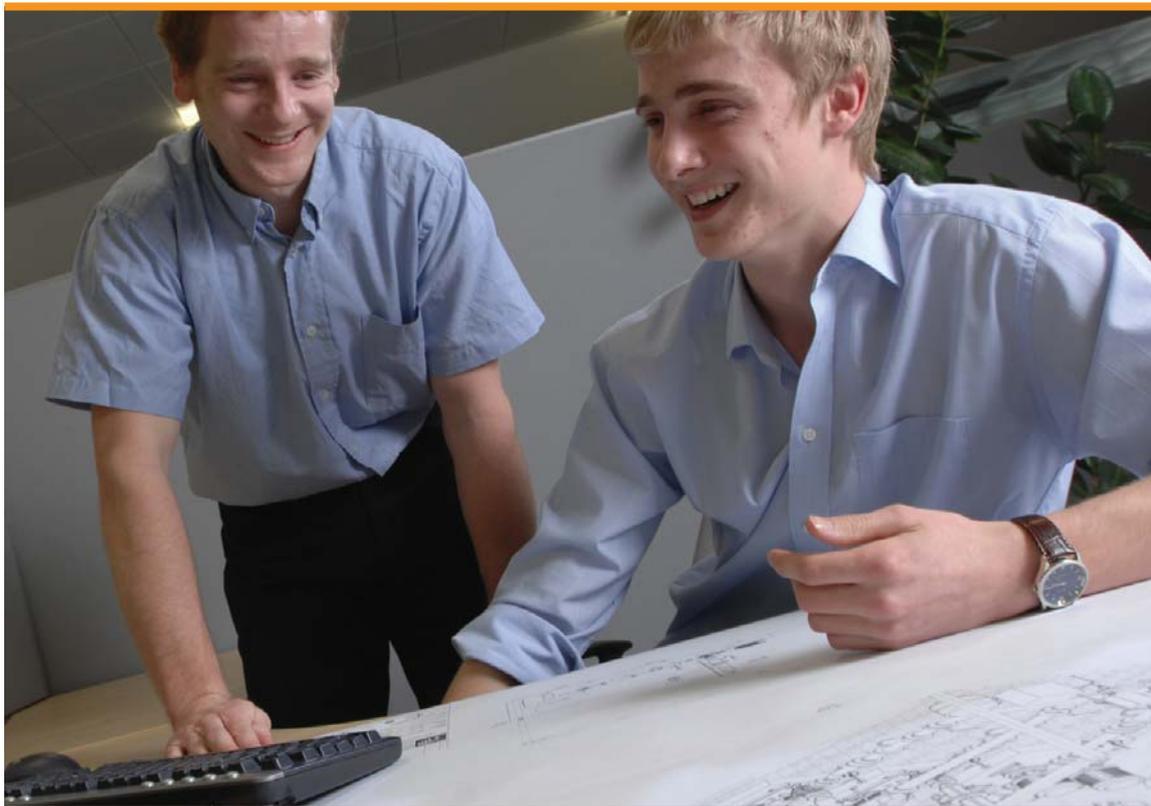


Tackling Climate Change- Guidance for Secondary Schools



Contents

Introduction	3
Climate change, sustainability and your school	4
Tackling climate change: Helping you to deliver	6
Where are you joining the journey?	9
Action point: Selling the idea to your school	10
Action point: Using a whole-school approach	14
Action point: Filling the knowledge gap	16
Action point: Maintaining momentum	19
Action point: Installing sustainable energy measures	21
What next?	24
Glossary	25
Links	27



Introduction

Climate change due to human activities is the most serious problem facing us in the 21st century. Since the industrial revolution, the amount of carbon dioxide (CO₂) in the atmosphere – the major gas that causes climate change - has increased by 35 per cent. In fact, the concentration of CO₂ is now higher than at any point in the past 650,000 years. This increase in CO₂ and other greenhouse gases (such as methane and nitrous oxide) is making the planet warmer: 11 of the 12 hottest years on record occurred between 1995 and 2006. And the average sea level around the UK is now about 10 cm higher than it was in 1900.¹

The major contribution we all make to climate change is through the energy we use, in our homes, as we travel, and in shops, school, offices and factories. Although most people are now aware of the threat of climate change, many of us still don't understand the most effective action we can take to reduce our carbon footprint.

Schools are ideally placed to take a lead within communities to reduce the carbon emissions that cause climate change. They might develop their science curriculum to incorporate learning about climate change, install a wind turbine on their building, or supply their communities with greener living tips. In all these cases they are increasing awareness of the impact of humans on climate change and encouraging action to reduce that impact.

Most importantly, schools can take a joined up approach. This involves linking work to reduce carbon emissions from the school **campus**, with education about climate change through the **curriculum** and with

action to raise awareness of climate change issues in the **community** and in students' homes.

This document focuses on how you can tackle climate change in your school. At the start, we'll be looking at how addressing energy use and carbon emissions can help you deliver against the government's sustainable schools strategy and Every Child Matters. The second half of the document takes you on a journey as you begin to tackle climate change issues at your school, explains what the steps are along the way and provides guidance to help you.

NB This document focuses on tackling climate change by saving energy from school buildings and in homes. That's because these are the biggest actions schools and young people can take to reduce their carbon footprint. There are lots of other areas in which we can make carbon-friendly choices. We can change the way we travel, the things we buy and the water we use.

NB This guide has been written for English secondary schools and draws on policies of the Department of Children, Schools and Families. However, the approach we use can be adopted by schools in the devolved administrations too. For further information on each country's approach to sustainable development in schools, please visit:

- Scotland: <http://www.scotland.gov.uk/Topics/SustainableDevelopment/UNDecade>
- Wales: http://new.wales.gov.uk/topics/educationandskills/policy_strategy_and_planning/sustainabledevelopment/?lang=en
- Northern Ireland: <http://www.ofmdfmi.gov.uk/index/economic-policy/economic-policy-sustainable-development.htm>

¹ See <http://www.direct.gov.uk/en/Environmentandgreenerliving/index.htm>

Climate change, sustainability and your school

The Department for Children, Schools and Families defines a sustainable school as one where:

[Through teaching and learning] pupils will be able to understand the impact we all have on the planet as schools themselves become models of good practice, demonstrating ideas of sustainable living and working. A sustainable school aims to prepare young people for a lifetime of sustainable living².

Successfully incorporating sustainability and climate change needs a whole-school approach where all members of a school community are aware of and involved in sustainable energy – from the head teacher and leadership team, to teachers, site staff, governors, parents and students. The benefits and opportunities to your school will be wide ranging and could include:

- Increased awareness of how the energy we use in our everyday life at home and school impacts on the global environment, and how our own small actions can help to make a big difference.
- Lesson content across the national curriculum and ‘real world’ learning experiences for students through, for example, the collection and analysis of energy monitoring data.
- Developing life skills by empowering students to take action within the school and in their own lives. This includes numeracy and literacy skills, citizenship, decision-making, budgeting and working in a team – it can even lead to vocational opportunities.
- Wider links with the local community and an opportunity for the school to become a centre of excellence for climate change.
- Opportunities for schools to invest in their buildings, for example to make them more energy efficient, which will reduce the schools’ energy bills and can be in turn be used as a teaching resource.

Sustainability and the National Curriculum

The new National Curriculum for Key Stages 3 and 4 came into effect from September 2008 and has been structured to allow teachers greater freedom for implementing a curriculum suited to their pupils’ needs, with more ways to demonstrate achievement and an emphasis on the acquisition of demonstrable skills. In terms of sustainability, environment is cited as an underpinning value to the entire curriculum, as is personal development.

Sustainability interfaces with many of the national curriculum subjects, if a broad enough approach is taken. As well as the more obvious subjects for teaching sustainability – such as Geography, Science or Design and Technology – it can also be used as a topic area in other subjects. For example, Citizenship prepares pupils to be functional, responsible citizens and could include policies and practices for sustainability and their impact on the environment. Or in English, while there are no specific environmental or sustainability strands, there is scope for using energy topics for writing, reading, listening and speaking skills, as much for any other topic.

There are also some specifically defined cross-curricular dimensions designed to reflect the

concepts and challenges of real society all of which could include sustainability and climate change. For example:

- **Global Dimension and Sustainable Development:** This dimension is the most suited to tackling issues of sustainability. Specific reference is made to providing opportunities for students to recognise that some of the Earth’s resources are finite and therefore must be used responsibly.
- **Identity and Cultural Diversity:** Pupils should develop an understanding of how diverse people, places, economies and environments in the global community are interconnected. This could link to discussions on sources of fuels, security of supply, local and global pollution issues, climate change and the economics of energy.
- **Enterprise:** This dimension is about problem solving activity, enterprise and evaluation. Known examples of energy related enterprise projects include the sale of low energy bulbs and Christmas cards designed for elderly relatives with messages about how to keep warm and use energy efficiently for the winter season.

² See http://publications.teachernet.gov.uk/eOrderingDownload/3593%20Bursars%20guide_web.pdf

Why focus on schools in tackling climate change?

Our generation is the first to knowingly degrade the environment, at the expense of children now and in the future – a fact that challenges most of our rhetoric about the importance of children in our society. Sustainable development is not an optional extra for children’s policy and services; it is a necessary part of building a society that cares for its children.

Every Child’s Future Matters³

Young people are significant consumers of energy in their own right. Teenagers today consume about 30 percent more energy than the previous generation. And, despite awareness of climate change, 85 per cent of 16-year-olds never unplug their mobile phone chargers and 86 per cent of 10-year-olds consistently leave their TVs on standby. These groups can be motivated to change; when pupils are engaged with curriculum-linked energy education programmes, 76 per cent of their families changed behaviour or invested in energy saving improvements. Children can become effective ‘energy advisers’ for their own families and alter their own behaviour.

Energy Efficiency Partnership for Homes⁴

Something to aim for: a school that’s maximising its impact on climate change

Different schools will be tackling climate change in different ways at different times, depending on their circumstances. You don’t have to do everything at once – what’s important is that you’re doing something at all! But a school that’s taking action like that described below is maximising its impact on climate change:

- **Addressing the contribution we all make to climate change is central to the school’s approach.** Climate change influences and is taken into account in all decisions that the school makes across the curriculum, campus and community.

- **The school buildings are managed sustainably making the best use of the existing structures and mechanisms for energy consumption control.** All refurbishments at the school are planned to encompass improved energy sustainability. Renewable energy technology has also been evaluated and these measures installed where feasible.
- **The school is visibly reducing its carbon emissions.** There is a prominent display in the school showing how much energy is being consumed or produced at any time. All students and staff take a personal responsibility for the school’s carbon footprint. There is a strong link between education and school management teams, with students and teaching staff directly engaged in energy data collection and feeding their ideas for improvements to the leadership team.
- **The whole school community is engaged.** Collaborative peer education policies that enable all within the school community to work together on sustainable energy projects. The school also has excellent links with their local authority and other external agencies to support them in their sustainability goals. The home/school link is also strong, with messages about sustainable energy also influencing parents.

Remember that wherever you are on your sustainable energy journey, it is important that you make best use of what your skills and needs are as an individual school. For example you might find that a need to develop your provision for those students at risk of exclusion is a perfect opportunity to engage a group of students with a creative sustainable energy project, tackling the issues of behaviour and inclusion as well as climate change.



³ See www.sd-commission.org.uk/publications/downloads/ECFM_report.pdf

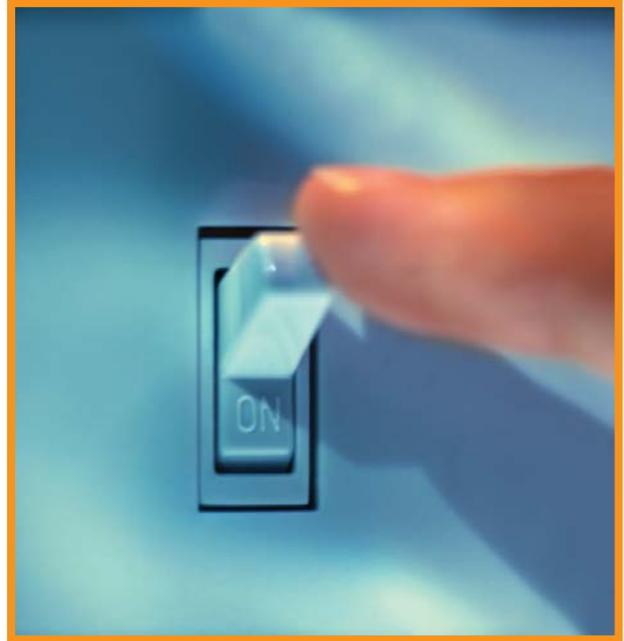
⁴ See <http://tinyurl.com/2j6mdo>

Tackling climate change: Helping you to deliver

Tackling climate change is about more than switching off lights. It can help you deliver on national educational strategies, contribute to an enriched curriculum, provide additional support and resources to staff and help you make links with your local community.

Helping to deliver on national strategies

Climate change and sustainable energy need to be integrated across the whole school: they should not just be ad hoc projects. One way of supporting this integration is to ensure that links are made between sustainable energy and national strategies. This can help you to sell the idea of sustainable energy to colleagues at your school.



Delivering on Every Child Matters

Every school has a duty to respond to **Every Child Matters** – the Government programme for a national framework to support the ‘joining up’ of children’s services. A whole-school approach to tackling climate change can help your school respond to each of the five basic criteria for wellbeing laid out in Every Child Matters:

- 1. Be healthy:** A school building designed and operated on sustainable energy principles is a healthy building. There are strong links between the building’s temperature and lighting levels, and achievement and learning.
- 2. Stay safe:** Engagement in the operation of an energy efficient school via an ‘eco team’ promotes positive behaviours in and outside school and helps to develop respect for the school itself.
- 3. Enjoy and achieve:** Pupils participating in practical sustainable energy projects using the school as a real-life ‘laboratory’ appeals to a wide range of pupils.
- 4. Make a positive contribution:** The contributions that students make via their involvement in the sustainable operation of their school allow them to contribute to a safer, stronger and greener school community.
- 5. Achieve economic well-being:** There is also an economic value to the whole school of acting sustainably through cost savings that can be made through behavioural change and capital investment. By their involvement in this work students can also develop functional and organisational skills and could become involved in social enterprise.

Delivering on the National Framework for Sustainable Schools

The National Framework introduces eight ‘doorways’ through which schools may choose to initiate or extend their sustainable school activity. It focuses on ways in which sustainable development can be embedded into whole-school management practices and provides practical guidance to help schools operate in a more sustainable way.

Each doorway can be approached individually or as part of a whole school action plan, though undoubtedly schools will find that many of the doorways are actually interconnected. The Framework offers opportunities for improvement across the school’s curriculum and campus, and in its relationship with the local community.

The eight doorways are:

- Energy and Water
- Buildings and Grounds
- Travel and Traffic
- Food and Drink
- Purchasing and Waste
- Inclusion and Participation
- Local Well-Being
- Global Dimension

Whichever of these doorways a school tackles, the steps it will go through to ensure a whole-school

approach will be similar – for example getting colleagues on board, encouraging student-led action, getting the topic included in lesson plans, using the school as a real-life teaching resource and making links with the local community. The steps detailed in the second half of this document can therefore be used across all eight doorways to help schools become truly sustainable across all of their activities.

What’s more, tackling climate change at your school will help you deliver on more than just the Energy and Water doorway. By discussing with the students global climate change issues you can also introduce topics such as food miles (Food and Drink doorway), congestion and pollution (Travel and Traffic doorway), and reducing, reusing and recycling (Purchasing and Waste doorway). The impacts of climate change also have direct relevance to the Global Dimension doorway. The Energy and Water doorway also has direct links to the Buildings and Grounds doorway, with the campus being used as a real-life teaching resource (for example by taking meter readings and considering investment in energy saving measures)^{5 6}.

Helping to deliver an enriched curriculum

Working with students on climate change and energy will help to deliver enriched learning experiences and active citizenship. In Defra’s recent survey of attitudes towards climate change, 72 per cent of students between 11 and 17 said they enjoyed studying climate change at school, and 90 per cent said that they would like to maintain or increase the focus on this topic in the future⁷. This indicates huge potential to use climate change issues as a vehicle to provide an enriched curriculum for all students.

Helping to deliver links with the wider community

Climate change and sustainable energy provides an opportunity for your school to take a leadership role within your wider community, and ‘demonstrate by doing’ to show the importance of action on sustainable energy.

The lessons your students learn in sustainable energy at school – from switching off lights to reading energy meters – can also be applied at home. Parents and other stakeholders can be drawn into your projects too. You can also share your experiences and good practice with other schools interested in introducing sustainable energy.

5 See www.everychildmatters.gov.uk/

6 See www.teachernet.gov.uk/sustainable-schools/framework

7 See www.sd-commission.org.uk/publications/downloads/ECFM_report.pdf

Case study Dorothy Stringer School, Brighton

Dorothy Stringer is a large comprehensive secondary school in Brighton, with 1,600 pupils. It has been an EcoSchool Green Flag school for nine years, and is still the only Green Flag secondary school in Brighton and Hove. It is a PFI-funded school.

The school has limited control over the fabric of the building and the energy bills of the school, so it has taken a different route to attain environmental excellence, and has achieved a huge amount through linking energy and environmental education very firmly to biodiversity and the physical environment of the school beyond the main buildings. This has led to the energy efficient refurbishment of a nearly derelict building on the school site into an Environment Centre (which is outside the remit of the PFI agreement). The Centre has been funded by several sponsors, grants and school fundraising (for instance through an annual summer environmental

fair and farmers' market) and has several demonstration installations of glazing, insulation and solar water heating giving excellent 'real' data to students on the energy savings achieved.

The Centre serves as a focus for many aspects of sustainable education within the main curriculum and also for the community and pupils engaged in the curriculum enrichment programmes. The Senior Leadership Team provides support to teaching staff to implement sustainable energy education in whatever way they see fit. In this way, teachers are able to use the National Curriculum as a starting point, but not be bound completely by it. Students are regularly taken on outward-bound trips to the Centre for Alternative Technology, and to see energy generation facilities, linking real world energy savings to the curriculum learning they carried out in the classroom.



Eco fair at Dorothy Stringer School

Where are you joining the journey?

Learning for Sustainability is a journey with a destination but no end. The journey is from a stage of pre-engagement to an advanced stage. You reach a stage rather than an end.

Learning for Sustainability Pathways: A Development Framework for School Sustainability, WWF⁸

Integrating climate change and sustainable energy into your school's work is a journey. Many schools are probably undertaking some form of action already, even if they don't realise it or label it as such.

It's important to value what you're already doing – and to do that you need to find out what's already going on. This could be anything from inclusion in lessons by one of the faculties, to regular reading of electricity meters by your site staff. You might have a School Council which is already considering how to improve the school environment.

At some stage, it will be important for you to carry out an environmental audit. This will look at the environmental impacts of your school and help to

stimulate support to implement a whole-school approach to sustainability that will include tackling climate change by reducing the energy used in the school's operations. An environmental audit need not be arduous and will become a useful baseline to compare how your school advances on an annual basis. Monitoring of your progress is also important: a feedback loop to the school community will help keep the issue alive and the students and staff interested.

A whole-school environmental audit should provide:

- A baseline from which improvements can be measured.
- A tool to encourage greater understanding of the issues.
- The basis for a plan of action which will allow your school to improve its environmental practice.
- Participation from all sectors of the school community.
- An effective and manageable way of monitoring, evaluating, reviewing and reporting to any interested party.

Further guidance on auditing and monitoring is given in the 'Maintaining Momentum' action point later in this guide.

⁸ See www.wflearning.org.uk/data/files/pathways-310.pdf

Action point: Selling the idea to your school

☹️ **Addressing climate change is such a massive issue – I don't think I can handle this on my own.**

😊 Tackling climate change is all about taking simple straightforward steps to reduce the energy your school and community uses, but to achieve that you will need commitment from across the school community. Having allies to support you as you try out new ideas can be really important. Talk to like-minded colleagues about your ideas and show them this guide. Start with the small steps, such as an audit which will help identify both the most significant and the easiest areas to start working on.

You don't need to invent new systems and teams to get sustainable energy delivered at your school. How can existing structures help you? Look beyond the teaching staff and think about how you can include students, site staff, members of the leadership team and the wider community.

😊 **How am I going to persuade people at my school that changing the way we use energy is a good idea?**

☹️ Climate change has a high level of media coverage and most people are comfortable with the ideas of carbon footprinting, energy efficiency and renewable energy. Some people you talk to will be interested in the 'green' agenda and will already be committed to 'doing their bit' towards saving the planet. They're probably already recycling household waste, may have fitted low energy light bulbs in their home and might cycle or walk to school rather than drive.

But this won't be the case with everyone. It's worthwhile trying to put yourself in the shoes of your colleagues, and trying to latch on to their concerns and priorities when you're discussing sustainable energy with them. Here are a few ideas about the approach you could take:

Head teacher

Your head teacher will have a strategic view of how the school should be and is performing. We've already shown how sustainability and climate change can tick all the boxes in delivering Every Child Matters. It can also help with Ofsted, as schools are obliged to identify how they are addressing sustainability issues.

Your Head will also be interested in the school's profile within the local community and amongst other

secondary schools. Looking at energy issues and the links to climate change is an excellent opportunity for your school to shine and to lead by example.

Once onside, your Head can be a powerful ally. When schools place a priority on tackling climate change in their performance management plan, it can easily be given an equal footing (simply through its cost and curriculum benefits) to behavioural issues or extended service provision.

Bursar

Reducing energy use provides cost-saving opportunities for your school. By monitoring and analysing energy consumption, savings can be made by behavioural change (such as switching off lights and computers when not in use) without any capital outlay. Larger investments in energy efficiency technologies can also be made which will have even bigger saving returns.

A 'Bursar's Guide to Sustainable School Operation' has been developed by DCSF and outlines the

measures that can be taken to reduce a school's environmental impact and make cash savings while enhancing the teaching and learning element of sustainable working practices within schools. The Guide is available to download from <http://publications.teachernet.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DFES-00375-2007&>

Senior team

The senior team at your school who lead on different subjects areas will be interested in what tackling climate change can offer in terms of an enriched curriculum. They might want to focus on where the opportunities lie for cross curricular links, or to see how education about energy issues and climate change can address vocational issues (a low carbon society is going to require new skills – for

example some of today's students will go on to become carbon managers or solar panel installers). They will be looking at how the new curriculum and 14-19 Diplomas will be interpreted and implemented at your school, and sustainable energy education has a role to play in both.

Teachers

Tackling climate change can offer teachers real-life scenarios to help them meet their learning objectives – such as meter readings, investment decisions for the school, and awareness raising campaigns. There's

a range of support available to schools who want it – either in the classroom or around the school site - and this can also be attractive to teaching staff. Sustainable energy can also be pursued through CPD.

Governors

Governors will be interested in a mixture of all the other messages outlined above, such is the cross-cutting remit of their role. They want to see an effective school in terms of curriculum, campus and community, and sustainable energy has a central role to play in all of these.

A series of tools have been developed to help Governors think about and act on sustainability. See www.teachernet.gov.uk/sustainableschools/tools/tools_detail.cfm?id=10 for further information.

Site staff

By helping to reduce the energy use from the school buildings, site staff have a key role to play in the way your school tackles climate change. Monitoring of energy consumption can form a central strand to your sustainable energy strategy. Tackling climate change can therefore help raise the profile of your site staff amongst the rest of the school community and demonstrate how important their role in the

effective running of a school campus.

Taking an interest in the school buildings through a sustainable energy programme should also encourage students to take more pride in their campus, which in turn should help to ease some of the site staff's workload (e.g. graffiti removal).

Students

Students will engage with discussion and teaching about climate change in the classroom, but they will engage even more enthusiastically if it impacts on their everyday lives. Addressing sustainable energy can help move teaching out of the classroom – for example by carrying out site audits or reading energy meters – which some students will respond well to. For some students, tackling energy issues may spark an interest in careers linked to energy and lead them into vocational training opportunities.

You may also find that primary/junior schools that your students attended included climate change in their curriculum and school ethos, and so the students will already have some prior knowledge and understanding. This can be utilised to good effect to improve the sustainability of your school. This can especially be the case in Year 7 transition where memories of primary school are fresh and exam pressures have yet to make an impact.

Parents

If parents are engaged in a subject, they can help you put pressure on the school to get it included in school activities – and sustainability and climate change are no different. A home/school link can also be fostered, with students influencing families to put into practice

what they've been learning about and acting on in school. If students and parents change the way they use energy at home this will also have the knock-on bonus of reducing their energy bills too, and widen the impact of the school's community leadership.

Case study Ringmer Community College, East Sussex

Ringmer Community College has a dedicated member of staff co-ordinating all the school's work on sustainability. Around 200 of the school's 800 pupils are Eco Representatives (each class has 2) who are responsible for turning off radiators, closing windows and doors, and switching off lights.

Changing behaviour has been key. Energy wasting behaviours are discouraged or even penalised. If a member of staff leaves their computer on overnight, they receive an email the next morning reminding them to switch it off in future. If they leave it on again, they are charged £5 from their teaching budget. Pupils, cleaners and caretakers all play a part in monitoring.

The school has photovoltaic (PV) panels and a wind turbine. Information about the PV panels and the turbine is shared with pupils through readouts in

science laboratories – the energy generated by the PV is the equivalent of what was wasted by equipment left on standby. The school also has an Energy Bike which is used in assemblies to power a mocked-up child's bedroom with lights, TV, stereo and MP3 charger.

The school has also introduced a policy whereby every curriculum leader has to have a sustainability element as part of their Self Evaluation Form. In many cases, the school's sustainability co-ordinator has brought together the resources and literature that teachers need to embed sustainability into the curriculum. This has helped provide the teachers with both the information they need and the confidence to deliver it.



Ringmer Community College's Head Girl with recycling bins

Action point: Using a whole-school approach

☹️ **My colleagues think that addressing climate change is not their area of responsibility**

😊 Sustainability is everyone's responsibility. Climate change is a global problem and to tackle it we all need to take local, personal action.

It's amazing just how many subject areas sustainability touches, from citizenship, geography and combined sciences, to food technology, art and media studies. There's always an angle to appeal to a variety of your colleagues if they understand 'what's in it for them'.

☹️ **How do I make sure our plan to address climate change impacts on the whole school?**

😊 **In the schools where sustainability has been successfully developed, it is something that is at the heart of the school and is a vehicle for delivering the Every Child Matters agenda rather than an add on activity – it pervades every aspect of school life.**

National College for School Leadership:
Leading Sustainable Schools website⁹

Each school has its own priorities and strategies and will communicate and make decisions in different ways. You should consider how addressing climate change can help deliver your own school's priorities and tap into this.

Sustainability should be tackled from a 'whole school' perspective. Sustainability considerations should colour every decision that is made: it should be something that is always taken into account. If it's not written into your school policies or management plan, find out how you can get a debate going and make it a real issue within your school.

Once sustainability is seen as a guiding principle for your school, it will be given a higher priority in activities across the curriculum, campus and community, and staff time should more easily be allocated to it.

☹️ **What might be the financial barriers to my school getting involved in sustainable energy?**

😊 Many schools are unaware of the cost of the energy that they use, and so are unaware of the impact of poor sustainable energy practice has. Savings can be made in a wide range of areas, and money saved can be used as an incentive for departments if it can be handed back to departmental heads to spend as they wish. You should also seek advice from your local authority and other external agencies about what funding programmes are available for improving school buildings.



⁹ See www.ncsl.org.uk/sustainableschools/index.cfm

Case study Whitecross School, Gloucester

Although sustainable energy is not a particularly high profile aspect of life at Whitecross School, it informs all decisions made. This is due to extensive buy-in from a whole range of stakeholders, from the senior team, teachers and governors, to students, the wider community and the Local Authority.

Whitecross School recently required a new building to allow for expansion of the school. The brief given to the architect by the school was to design a space suitable for offices and teaching, and for it to be as sustainable as possible. The resulting building has a wide range of energy saving features, including maximum use of natural lighting, motion sensors to turn off lights when they are not in use, and a ground source heat pump to provide under-floor heating.

The school provided 30 per cent of the funding for the project, with the Local Authority paying the remainder. The school's good relationship with the

Local Authority has been vital in the success of the project. The Local Authority was involved from the very first planning which meant knowledge, experience and ideas could be accessed, and potential future pitfalls or problems avoided. Although the Local Authority didn't focus on the environmental impact of the building initially, they were very interested in what the school was proposing, and fully bought into the project.

Whitecross School has specialist status as an engineering college, and has a real focus on community engagement and involvement. The school ran an adult education course on 'green energy', and uses the new building as a teaching resource, for example through the use of display panels which show how much rainwater has been harvested and the temperature of the water in the heating system. A local school recently came to them for advice on installing a wind turbine, as they now have a reputation for excellence in sustainable energy.



The Ellen MacArthur Building at Whitecross School

Action point: Filling the knowledge gap

⊖ There are too many confusing messages about climate change

☺ Climate change is high on the public and political agenda at the moment, and has lots of coverage in the media. But do you – or your colleagues – really know the differences or links between global warming, the hole in the ozone and increased carbon emissions? They're all phrases that are being used a lot – not always accurately – and it can be difficult to understand exactly what's going on.

If you and your colleagues want to teach your students about climate change and sustainable energy, it's important that you understand the basic principles yourself first. Of course, there are all the usual resources you to turn to for guidance – including the internet. Colleagues in other departments – such as geography or science – may also be able to help you. There are lots of resource 'packs' that have been put together by agencies and companies interested in getting the sustainable energy message across, that have direct links to the national curriculum.

It might be worth thinking about having some external support in raising the basic level of understanding about climate change and sustainable energy amongst the staff at your school, before you try to pass on messages to your students. There are a variety of agencies who are funded to give staff training in the workplace on climate change, and they may be able to come and run a session at your school (perhaps as part of an INSET day).

Further information about climate change – from causes and effects to calculating your carbon footprint – is available at www.climatechallenge.gov.uk.

⊖ How do we find out what to teach the students?

☺ There are numerous resource 'packs' available for you to use in planning and delivering lessons involving sustainable energy.

Resources have been developed by a wide variety of organisations – including government departments, energy suppliers and technology manufacturers. Many of them have been distributed to schools in the past, so it

might be worth checking if your school already has any of them available. Newer resource packs may be available online. There may be support available from your local authority, who will have an understanding of local best practice examples. In some areas there are also external agencies and NGOs that can offer you support.

When deciding which resource pack to use, you should bear in mind the following points:

- **Who has written or funded the pack?** Are they trying to sell you something? Does it matter? It might be something as small as getting their company name in front of young people with a 'good' message attached.
- **When was it written?** Even with older resources, some of the activities will still be valid – although some may need tweaking a little. For example, the cost of energy has risen steeply over recent years, so activities that use energy costs as part of the exercise will need updating but they will still have valuable learning objectives. You may also need to bear in mind how older packs link to the new curriculum, and check if they still meet your learning criteria.
- **Has your school used the pack before?** Check with colleagues to find out if they've used the pack, what they thought about it and what they'd change. If you're in contact with other schools in your area, you could ask them too.

The Carbon Detectives Kit, funded by DCSF, has been developed for Key Stages 2 and 3 to help them investigate the sustainability performance of their own school and develop practical suggestions for staff and governors on moving forward. See www.carbondetectives.org.uk for more information.

A Climate Change Pack – a resource pack to help teachers and pupils explore and understand the issues surrounding climate change – was sent to every secondary school in England. The pack which includes the Al Gore film 'An Inconvenient Truth' and a number of other resources is accompanied by online teaching guidance showing how to use the resources in the pack in science, geography and citizenship lessons. See www.teachernet.gov.uk/sustainableschools/library/resources/library_resource_detail.cfm?id=140 for more information.

As part of the Sustainable Schools Framework, a series of assembly plans has also been published for head teachers and school leaders, available for download at http://www.teachernet.gov.uk/_doc/10752/Sustainable%20Schools%20Assemblies.pdf

Another key resource for teaching about climate change is the school buildings themselves. Applying the lessons to the school building will help the subject become more real. Getting out of the classroom and doing an audit of the campus or reading energy meters can also be very appealing to some students, and help them to engage with the subject. Sustainable energy lends itself to campus-wide projects that can promote pride in the school. And all of this can help drive real energy savings, which should be monitored, celebrated as an achievement and then fed back into the ongoing cycle of action on sustainable energy.

Buildings can be made even more useful in terms of sustainable energy if consideration is given when capital improvements to the buildings are undertaken. Display monitors can be erected in communal areas of the school – such as the foyer or canteen. Sections of wall insulation can be left exposed (behind clear glass/plastic rather than behind the wall) so students can see what's happened and assess what impact it has. Renewable energy technologies – such as solar panels or small wind turbines – can be monitored and their energy production analysed.

☹️ **Staff at my school are already busy enough, without having to worry about tackling climate change**

😊 Adopting a whole-school approach to sustainability and climate change will enable staff time to be specifically allocated to the area. By demonstrating how it can also deliver an enriched curriculum, you can show colleagues that it will be time well spent. But even without this, there are approaches that you can take to ease the time burden of introducing sustainable energy:

- **Identify what motivates different colleagues to become involved** – use some of our ideas in the 'Selling the Idea to your School' section above.
- **Get your students on board.** It is an extremely valuable exercise for the message of getting everyone involved to come from the students themselves, and can be a very powerful tool for increasing engagement from the whole school.
- **Use existing systems and teams** to take on responsibility for driving sustainable energy forward at your school. This could be staff-led teams, or the student council. Staff with non-contact time could also play an important role.
- **Get external support** – start with your local authority. Councils have targets to reduce energy consumption and save carbon within their area, and many have energy experts who will be able to offer you guidance and support. There are also a variety of local and national organizations who specialise in sustainable energy and may be able to offer you support.

☹️ **How do I know which external support agency is right for me?**

😊 External support agencies come in many forms and can support you in sustainable energy at your school in as small or large a way as you wish. Many are non-profit making, some are limited companies, and others are entirely volunteer-based. Some organisations will be able to help you with putting together lesson plans, giving training to teaching staff, or delivering assemblies on sustainable energy issues. Others will be able to point you in the direction of funding for projects and measures, and perhaps even help you secure it. There are consultancies which will provide professional services such as design, architectural or engineering services if you're embarking on a large physical project.

To find out which organisations are working in your local area, speak to your local authority or check the Sustainable Schools website¹⁰.

¹⁰ See www.teachernet.gov.uk/sustainableschools/framework/framework_detail.cfm?id=39 for more information

Case study Highbury Fields School, London

Highbury Fields School in London started on its sustainability journey due to the enthusiasm of a few motivated teachers, who called their local council for advice. Islington Council realised they didn't have enough capacity to deliver the services that Highbury Fields, and many other schools in the area, were requesting, and as a result formed a partnership with an external sustainability organisation: Global Action Plan (GAP).

Using their Strategic Partnership Fund, Islington Council have funded GAP to work with 10 schools in the area, including Highbury Fields. This pays for a GAP Project Manager, who has direct contact with the schools and offers them support, and an energy audit at each school. The Education Manager of Islington Council's Energy team works alongside the GAP

Project Manager to ensure that an integrated service is provided. This partnership is intended to be a long-term one, and will assist the Council in achieving its aim of reducing carbon dioxide emissions from businesses, household and schools by 15 per cent by 2010.



Planet Preserves at Highbury Fields School, Photo courtesy GAP

Case study St Katherine's School, North Somerset

St Katherine's School in North Somerset has taken a diverse and commercial approach to sourcing funding to increase the sustainability of the school. They have gained specialist Science College status, the associated funding for which has been used to install solar panels on the school roof. They are also working in partnership with the Local Authority and businesses to make improvements. The emphasis has been on making the school more environmentally friendly (particularly through energy efficiency) at the same time as improving its connections with the local community and business.

Two years ago they signed a "Performance Partnership" contract, which combines utility supply via EDF Energy and energy reduction services through a maintenance programme provided by Dalkia. This involves the school paying a fixed annual fee in exchange for energy supply, a full energy audit and a programme of work. This includes the replacement and upgrade of boilers, lighting and insulation, as well as the installation of a computerised energy management system. Dalkia's package also includes health and safety management, and a series of interactive workshops for pupils. These workshops have been extremely successful in engaging with pupils and getting them to consider the impacts of energy use.

The initiative has been led by the senior staff, including Business Manager Laurence Frewin. Laurence recognises the need to embed energy efficiency more deeply throughout the school. Time constraints are the main barrier to this, but teachers are willing and interested – the interactive and creative approach used in the energy efficiency workshops fits in well with the school's new ideas about effective teaching. Six teachers were recently taken off-site for training, and the results have been impressive – finding the funding to allow teachers' time to be freed up is an ongoing challenge however.



Sixth Form block and visitor reception at St Katherine's School

Action point: Maintaining momentum

⚠️ How do I prevent action on climate change from being a ‘flash in the pan’?

😊 Tackling climate change cannot be centred around a one-off project. It should be undertaken as a whole-school approach with everyone within the school taking an interest and pride in the work being undertaken. It should remain visible to school users all year round – whether that be through posters around the school, energy consumption displays or articles in newsletters.

Being able to prove and show the benefits of sustainable energy to your individual school is vital to ensuring the

sustainability of the topic. This will only happen through ensuring that an initial baseline assessment of work already being done is followed by regular monitoring and review of progress. Don't be put off by this though – student and community led self evaluation and monitoring can be just as powerful as teacher centred analysis.

Learning is a cyclic process and one that is at the core of educators' efforts to develop good practice. Monitoring and evaluation are essential opportunities to reflect on and record learning.

Learning for Sustainability Pathways: A Development Framework for School Sustainability, WWF¹¹

Case study Top Valley School, Nottinghamshire

Caroline Henty was employed as an environmental co-ordinator at Top Valley School in 1994, reporting to the Deputy Head with a limited budget and a remit to secure funding to improve the physical environment of the school and its grounds. This has resulted in a 'wildlife corridor' of trees and wildflower meadows being planted through the school grounds as part of PSHE and Citizenship lessons, and a Community Garden designed and planted by students on an OCN alternative curriculum course. As part of the energy auditing process that was instituted, meter readings were passed onto the students who analysed them using a database they had created. Using these readings - and treating it like a 'detective story' - the students identified several areas where savings could be made. With new strategies in place, the savings were significant enough for the local authority to become interested in what the school was doing. These successes were reinforced by regular energy audits, reporting to the Senior Leadership Team.

To help deliver the Environment strand of PSHE, Citizenship and an alternative OCN Curriculum, Top Valley was able to create worksheets, lesson plans

and other resources. These resources were also developed to help deliver Eco Schools whilst better covering topics like environmental sustainability. In partnership with Nottingham City Council, Caroline has developed a website (www.enviroaction.co.uk) covering each Key Stage to offer these resources to other teachers and students.



An energy audit at Top Valley School

¹¹ See www.wwflearning.org.uk/data/files/pathways-310.pdf

☹️ **There are lots of different environmental audits – which one should I use?**

😊 There are a variety of environmental audits that you could use at your school. You can create your own, use the support of local environmental organisations, or use existing templates. Links to existing auditing and evaluation tools can be found on the Sustainable Schools website¹².

When choosing an environmental audit it is important to bear in mind the following:

- Ideally an environmental audit should include topics which cover all environmental impacts, ranging from energy to biodiversity. These can then be addressed on a topic by topic basis, or all in one go.
- The best environmental audits will include questions which allow you to simply gather baseline data, from which you will be able to monitor, evaluate, review and report on progress.
- Audits should be dated, and signed by the Head Teacher (to demonstrate senior level buy-in).
- Audits should be reviewed annually to check progress, and showcase positive steps taken.
- Environmental audits which include introductory and follow up information on a given topic allow everyone taking part to develop their understanding of the significance and relevance of the topic covered.

Environmental auditing should not happen in isolation. Clear links should be made with the wider school community. Environmental auditing should be undertaken by an inclusive group which has representation of students, staff, parents, governors, the leadership team and those who will be involved in the processing of the information gathered. It can be an inspiring and enlightening activity.

The S3 self-evaluation tool has been designed to help schools evaluate their current efforts to create a sustainable school and to inform their next steps. Because it is structured using the headings in the OFSTED self-evaluation form, it provides a neat way to demonstrate how sustainability contributes to school improvement. The Tool is available to download at http://www.teachernet.gov.uk/sustainableschools/tools/tools_detail.cfm?id=2

‘Planning a sustainable school guidance’ has been designed for schools to use with the S3 in the school planning and improvement cycle. The activities are intended to help schools plan, implement, monitor and evaluate their progress towards becoming a sustainable school. The Guidance is available to download at <http://publications.teachernet.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-00245-2008>



¹² See www.teachernet.gov.uk/sustainableschools/framework/framework_detail.cfm?id=38

Action point: Installing sustainable energy measures

☹️ Is energy efficiency or renewable energy best for my school?

😊 In teaching about the links between climate change, carbon and energy use, the school buildings can provide a valuable resource for your teaching. Your school may decide that it wants to invest in energy efficiency or renewable energy technologies to help reduce your carbon emissions.

Whilst it's true that energy efficiency is the most important first step in any sustainable energy project, it's also true that those measures are not as 'exciting' as renewable technologies. Wind turbines and solar panels are more visually interesting than insulation and thermostatic radiator valves, but energy efficiency should always come first. It also makes sound financial sense to invest in energy efficiency measures first as they tend to be cheaper, and therefore have a shorter 'payback period' (the time it takes to make back in energy savings what you spent on installation).

DCSF have developed a series of ten sustainable design case studies to guide and inspire architects, contractors, building commissioners and school teams involved in new build and refurbishment projects. See www.tsoshop.co.uk/education/bookstore.asp?FO=1160390&ProductID=0112711901&Action=Book

☹️ What are the options if we want to invest in energy efficiency technology?

😊 Your audit will help to identify which energy efficiency measures are needed at your school. You can then calculate how much they will cost/save. It is important to involve your local authority in this process as they may be able to offer relevant local guidance or information. The kinds of energy efficiency which have been shown to work in a school setting are:

- Energy efficient condensing boilers (A rated)

- Heating controls – thermostats, timers, zone controls
- Thermostatic radiator valves
- Occupancy sensors for lighting
- Insulation (cavity wall, roof, underfloor)
- Draughtproofing
- Energy efficient lighting (tubes and lamps)
- A-rated appliances (ICT as well as kitchen appliances)

There are some top tips for saving energy at your school on the Sustainable Schools website at www.teachernet.gov.uk/sustainableschools/framework/framework_detail.cfm?id=37

☹️ We want to install renewable energy technology but it's too expensive

😊 There's a variety of renewable energy technologies that are appropriate for schools, depending on their location and size, including:

- Wind turbines (both large scale and micro/roof-mounted machines)
- Photovoltaic panels (electricity generating)
- Biomass boilers
- Air source heat pumps
- Ground source heat pumps

It's vital to get a feasibility study done before investing in renewables, as the physical characteristics of your site will determine what will work. There's no point in spending money on a wind turbine if your school is surrounded by high buildings, or on solar panels if your roof is mostly north facing. Your local authority should be able to give you guidance about how to get this done.

There is no doubt that large-scale renewable technologies are expensive and that they will require some investment, most likely from external funders. There is help available but it tends to change over time (especially local and central government funding). The best first step is to contact your local authority to find out if they have any funding you can access. You can then seek match funding from trust funds, charitable organisations and commercial companies (especially energy companies). The Sustainable Schools website includes some information on funding sources¹³.

¹³ See www.teachernet.gov.uk/sustainableschools/support/funding.cfm

It's likely that you will need a 'patchwork' of funding which brings its own challenges but also means that you can build up the budget gradually as funding is agreed. If you have been able to put savings figures (both financial and energy savings) against the proposed project then you will have a much stronger case and be more likely to be able to demonstrate its economic and environmental sustainability.

The Carbon Trust was set up by the Government in 2001 to help organisations reduce carbon emissions. They will be able to provide you with further information about energy efficiency and renewable energy measures appropriate for school buildings. Further information is available at www.carbontrust.co.uk.

Case study Notre Dame School, Sheffield

Notre Dame School in Sheffield in partnership with the Hallam City Learning Centre is in the process of developing a new building for its Environmental Learning Site, co-ordinated for Notre Dame by the Assistant Headteacher, Paul Haigh. This building will be constructed to very high sustainability standards, including the use of super insulation, locally sourced sustainable materials like constructed by local craftsmen. This Centre will provide a new home for the school's environmental learning programme, but also will provide resources for the community and local schools for activities such as bird watching via webcams.

The Centre will make use of new technologies to facilitate environmental learning and will link in with the existing City Learning Centre on the school site - and this is how funding was secured to build the new site. The fund from which the money for rebuilding was secured is aimed primarily at funding new technology and multimedia projects; by

delivering environmental learning using technologies such as webcams, networks and computer monitoring, Notre Dame was able to secure funding for this sustainability project.

Part of Notre Dame's policy has been to choose contractors for sustainability projects taking into account the contractor's own sustainability credentials. Via one of these 'preferred' contractors, Notre Dame was put in contact with Groundwork Sheffield, who have supported the school, and been able to secure match funding for other aspects of its sustainability programme. The impetus for the school's sustainability work came directly from the commitment of the governing body and the senior leadership team. All members of the school have been involved in some aspect of the school's Eco-School accreditation activities, in particular the School Council and the Justice Group – both student bodies.



Taking the compost at Notre Dame School

What next?

How to be outstanding

Tackling climate change is about more than switching off. One of the fantastic things about sustainable energy is that has so much potential to make really significant positive changes, both immediate and for your students' futures. If you can build in the flexibility to allow your students to become involved in local issues which have global impact then student engagement and feelings of self-worth will increase dramatically.

Allowing your students to regularly debate and form their own opinions on issues in the news, such as the Stern Report or the rising issue of fast approaching Peak Oil, might lead to very creative projects in school. As an example students might want to become more involved with the Transition Town movement, which is promoting the development of towns which are self sufficient, instead of reliant on oil to fuel their supply chain¹⁴. They might move on to involving Young Enterprise groups with the creation of a locally sourced and made product, to combat the need to transport in from elsewhere¹⁵.

Some schools could also aim to become carbon neutral, and get their whole community involved with all aspects of their supply chain, from food procurement to energy use, and become self sufficient in terms of their energy needs, generating onsite renewable energy.



¹⁴ See www.transitiontowns.org

¹⁵ See www.young-enterprise.org.uk

Glossary

14-19 Diplomas

The Diploma is a new qualification that combines theoretical study with practical experience and is part of the 14-19 Reform Programme being rolled out over the next five years.¹

Carbon Emissions

Everyday actions like driving a car, flying and even using a computer consume energy and produce greenhouse gas emissions – such as carbon dioxide – which contribute to climate change. For schools, carbon emissions arise from a variety of sources, including energy use in buildings, food, travel and transport, procurement and waste.²

Carbon Footprint

Everyone has a carbon footprint – it's your own personal measure of how much carbon dioxide you create and how much you contribute to climate change. Carbon footprints can also be calculated for larger units, such as schools.³

Climate Change

Today, when people talk about 'climate change', they mean the shifts in temperature that have happened over the last 100 years. During this time, the average temperature of the atmosphere near the earth's surface has risen by 0.74 degrees Celsius. 11 of the 12 hottest years on record occurred between 1995 and 2006, and the average sea level around the UK is now about 10 cm higher than it was in 1900. Most scientists agree that global temperatures could rise between 1.1 and 6.4 degrees Celsius above 1990 levels by the end of the 21st century, depending on future emissions of greenhouse gases.⁴

There is now very strong evidence and almost universal agreement that significant global warming cannot be explained just by natural variations. The changes seen over recent years, and those which are predicted over the next 80 years, are thought to be mainly as a result of human behaviour.⁵

CPD

Continuing Professional Development. CPD is relevant to all teachers. It is about making progress in the teaching profession – increasing the teachers' skills, knowledge and understanding as outlined in the professional standards for teachers.⁶

Eco-schools

Eco-Schools is an international award programme that guides schools on their sustainable journey, providing a framework to help embed these principles into the heart of school life. It is important that schools are aware of the relative impact of the actions they can take, for example that action on transport, food or school heating lead to far higher CO₂ reductions than recycling does.⁷

Energy Efficiency

Energy efficiency is about thinking how to save as much energy as possible. The average school could save money by implementing energy efficiency measures – both low and no-cost measures, and those with higher capital costs. This would result in a reduction in carbon dioxide emissions.⁸

Every Child Matters

Every Child Matters: Change for Children is a new approach to the well-being of children and young people from birth to age 19. The aim is for every child, whatever their background or their circumstances, to have the support they need to: be healthy; stay safe; enjoy and achieve; make a positive contribution; and achieve economic well-being.⁹

Home-School Link

Young people are significant consumers of energy in their own right. When pupils are engaged with curriculum-linked energy education programmes, they can influence their families to change behaviour or invest in energy saving improvements. Children can become effective 'energy advisers' for their own homes.¹⁰

National Framework for Sustainable Schools

The National Framework introduces eight 'doorways' through which schools may choose to initiate or extend their sustainable school activity: food and drink; energy and water; travel and traffic; purchasing and waste; buildings and grounds; inclusion and participation; local well-being; and global dimension. It focuses on ways in which sustainable development can be embedded into whole-school management practices and provides practical guidance to help schools operate in a more sustainable way.¹¹

Renewable Energy

Renewable energy is produced using resources such as the sun, wind or water, rather than using fossil fuels which emit carbon. Renewable energy technologies that could be installed in schools include photovoltaic panels (PV), ground source heat pumps (GSHP), wind turbines and biomass boilers. Schools interested in installing any of these should explore carefully the costs, energy produced and educational value.¹²

Stern Report

The Stern Review on the Economics of Climate Change was published in 2006. It examines the impacts and risks arising from uncontrolled climate change, and on the costs and opportunities associated with action to tackle it.¹³

Sustainable School

A sustainable school is essentially one which is guided through the principle of care:

- care for oneself
- care for each other, across cultures, distances and time
- care for the environment, both far and near.¹⁴

Whole-School Approach

A whole-school approach means that everyone in the school has a role in advancing sustainable development and that a holistic approach is taken to school improvement covering three major areas of school life across curriculum (teaching provision and learning), campus (values and ways of working) and community (wider influence and partnerships).¹⁵

Glossary references

- 1 <http://www.dcsf.gov.uk/14-19/index.cfm?go=site.home&sid=3&pid=224&ctype=None&ptype=Contents>
- 2 http://www.direct.gov.uk/en/Environmentandgreenerliving/TheWiderEnvironment/DG_070060 and <http://www.sd-commission.org.uk/publications.php?id=765>
- 3 <http://campaigns.direct.gov.uk/actonco2/home.html>
- 4 http://www.direct.gov.uk/en/Environmentandgreenerliving/TheWiderEnvironment/Climatechange/DG_072901
- 5 http://www.direct.gov.uk/en/Environmentandgreenerliving/TheWiderEnvironment/Climatechange/DG_072920
- 6 <http://www.teachernet.gov.uk/professionaldevelopment/>
- 7 <http://www.eco-schools.org.uk/>
- 8 <http://www.teachernet.gov.uk/sustainableschools/utills/glossary.cfm>
- 9 <http://www.everychildmatters.gov.uk/>
- 10 <http://www.eeph.org.uk/uploads/documents/partnership/Sustainable%20Energy%20Education%20Schools%20Paper%20Aug07.pdf>
- 11 http://www.teachernet.gov.uk/sustainableschools/framework/framework_detail.cfm
- 12 http://www.direct.gov.uk/en/Environmentandgreenerliving/Energyandwatersaving/Renewableandlowcarbonenergy/DG_064372
- 13 http://62.164.176.164/stern_review_climate_change.htm
- 14 <http://www.teachernet.gov.uk/sustainableschools/utills/glossary.cfm>
- 15 http://www.teachernet.gov.uk/sustainableschools/about/about_detail.cfm?id=11

Links

Links to useful websites where you can get more information and download publications about how to tackle climate change in your school are included throughout this Guide. However, some of the key websites are also listed below:

Carbon Detectives

www.carbondetectives.org.uk

The Carbon Detectives Kit is an online carbon footprint calculator for schools in England. Funded by DCSF, it has been developed for Key Stages 2 and 3 to help them investigate the sustainability performance of their own school and develop practical suggestions for staff and governors on moving forward.

Carbon Trust

www.carbontrust.co.uk

The Carbon Trust was set up by Government in 2001 as an independent company. Their mission is to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies. They will be able to provide you with further information about energy efficiency and renewable energy measures appropriate for school buildings. In April 2008 the Carbon Trust published 'A whole school approach: Involving the school community in reducing its carbon footprint' which you may find useful and can be downloaded from their website.

DirectGov: Environment and Greener Living

www.direct.gov.uk/environmentandgreenerliving/index.htm

DirectGov ('the official government website for citizens') has lots of information on the environment, from the science behind climate change and how it impacts on us, to guidance on what we can do as individuals to make a difference. Topics include greener living, greener travel and leisure, waste and recycling, energy and water saving, the wider environment, your local environment, greener shopping and green gardening.

Energy Efficiency Partnership for Homes

www.eeph.org.uk

The Energy Efficiency Partnership for Homes (EEPH) is a network of over 425 organisations from the public, private and voluntary sectors who work together to reduce the energy consumed by UK households, as well as the number of people who are unable to sufficiently heat their homes during winter. The EEPH Education Taskgroup commissioned this Guide.

Energy Saving Trust

www.energysavingtrust.org.uk

A non-profit organisation that provides free impartial advice tailored to suit individual householders. Their advice can help you save money and fight climate change by reducing carbon dioxide emissions from your home. Information on their website could help you reinforce the home-school link when developing lesson plans.

National College for School Leadership: Leading Sustainable Schools

www.ncls.org.uk/sustainableschools-index

The National College for School Leadership (NCSL) works to make a difference to children's lives through excellent school leadership – growing and supporting current and future school leaders so that they can have a positive impact within and beyond their schools. NCSL is committed to helping school leaders develop sustainability through a variety of activities and further information is available on their website.

Teachernet: Sustainable Schools

www.teachernet.gov.uk/sustainableschools

TeacherNet has been developed by DCSF as a resource to support the education profession. The Sustainable Schools area of Teachernet is designed to support schools on their journey to sustainability, introducing the principles of sustainable development and offering guidance on how to embed these principles into the heart of school life. The site provides useful information for all sectors of the school community, including the leadership team, teachers and parents, and offers a number of excellent online and downloadable tools to help schools identify the best route to becoming more sustainable.

