Local Government Improvement and Development

PAS planning advisory service

Environment

Sustainable energy options:

How do you choose the right solutions for your area?

Contents

Introduction

Local authorities are exploring opportunities and starting energy generation projects across the UK. With the right to sell electricity and set up energy companies, local authorities can earn money through financial incentives such as the feed-in tariffs and the renewable heat incentive. Renewable energy is an investment opportunity for local government.

Councils can lead energy projects to reduce their residents' energy bills, tackle fuel poverty and create and support local markets and jobs. They can also support community groups or developers to achieve these aims through their own energy projects.

Some strategic energy projects, like district heating schemes, can act as an incentive for development because they will help developers meet new carbon reduction obligations in changes to the Building Regulations. Generating renewable energy can also reduce councils' dependence on volatile energy markets.

This publication is aimed at local authority strategic leaders, specifically: elected members, portfolio holders and senior officers. It looks at examples of councils and communities that are leading on energy generation. It explains what they did to start and fund energy projects and the benefits that these projects have brought to their area.

Information on eight sustainable energy technologies, an introduction to energy planning and all of the case studies in this publication are available on the **Compare renewables** web-based resource.

You can access Compare renewables here

Section 1: what do I need to know about energy?

As of August 2010, local authorities can sell electricity to the national grid. This has opened up opportunities for councils to generate sustainable energy, cut energy costs, lower resident's fuel bills, create local jobs and reduce carbon emissions.

Sustainable energy can generate income

The biggest barrier to starting energy projects for councils has been finding the initial capital. Funding incentives for renewable energy through the feed-in tariffs (FITs) and the renewable heat incentive (RHI) have helped make schemes viable for local authorities. There is also a variety of grants, loans and incentives that local authorities can use to develop energy projects (a full list is available in the appendix).

The **feed-in tariffs** are for microgeneration (less than five megawatts) renewable energy schemes. The tariffs will be paid for 20 to 25 years, depending on the technology. There are two tariffs: the generation tariff and the export tariff. This means that you get paid for both the energy you generate, regardless of whether you use it, and the energy that you export back to the national grid.

Councils have looked to the feed-in tariffs to make small scale renewable energy viable in their communities. **Kirklees Council** have installed 60 solar photovoltaic panels at the Croftlands Estate. Tenants are saving between £100 and £150 on their energy bills and the council is paying back their costs through income from the feed-in tariffs.

In a similar scheme, **Birmingham City Council** is installing solar photovoltaic panels on 60 homes that have already had energy efficiency measures. This is a part of the Birmingham Energy Savers programme. The

first phase had an upfront cost of £500,000. This will be paid back in 13 years through the feed-in tariffs income at £40,000 to £50,000 per year. Since the feed-in tariffs are guaranteed for 25 years for solar photovoltaic, Birmingham will earn £480,000 to £600,000 over the remaining 12 years.

The homes included in the **Kirklees** and **Birmingham** schemes had insulation measures first. The Energy Saving Trust estimates that half of the heat loss in a home is through the walls and loft. Insulation reduces carbon emissions by preventing energy waste through heat loss. It also ensures good value for money on renewable energy installations.

The **renewable heat incentive** (RHI) will be launched in June 2011 and is the main funding stream for renewable heat generation. It has superseded the Low Carbon Buildings Program which is now closed to new applicants. Anyone who has installed a renewable heat-producing system after 15th July 2009 will be able to claim RHI from June 2011. As there is no upper limit to the size of the heat equipment eligible under the RHI, schemes may range from individual dwelling or business to community-sized district heating facilities.

Worcestershire County Council has installed ten biomass boilers since 1996. Recently, they installed a new boiler house at a primary school. The heating bill at the school reduced by over fifty per cent. This project was funded through the Low Carbon Buildings Programme. Worcestershire will continue to install wood boilers in schools using the RHI. They estimate that a 100 kilowatt wood-chip boiler would pay back in 17 years without the RHI. With RHI, the payback period would reduce to six years.

"My advice to all my fellow councillors is to speak out about the wasted energy we have thrown away over the last few decades. Let us all take responsibility for our local energy consumption and make sure we adopt real localism on our energy and invest to cut our energy bills by 50 per cent over the next 10 years. That way we will really be able restore spending power and jobs into our localities".

Councillor Paul Tilsley, Deputy Leader of Birmingham City Council

Sustainable energy can cut fuel bills

Councils are generating renewable energy to cut fuel bills for residents in fuel poverty. A household is in fuel poverty if more than 10 per cent of the householder's income is used on fuel bills. The Coalition Government's Green Deal will replace the Warm Front scheme that addressed fuel poverty. However, the Green Deal will not be targeted at fuel-poor homes. Councils have a key role to play in ensuring that all residents have access to affordable heating and cooling.

Kirklees and **Birmingham** targeted the homes that would benefit most from reduced fuel bills. They ensured that these homes had energy efficiency measures before receiving a solar panel. These homes are now saving between £100 and £200 on their fuel bills annually.

Rural properties off gas mains are particularly susceptible to fuel poverty. **Cornwall Council** worked with their arms-length management organisation, Carrick Housing, to install ground source heat pumps on rural homes. They improved the Standard Assessment Procedure (SAP) ratings of the homes from 70 to 90 by installing the heat pumps and insulation. The ground source heat pumps

"One of the greatest threats to any local economy in the future will be energy supply; both the security and the cost. This means that any reduction in dependency on carbon fuels not only reduces the local footprint but also has a beneficial long-term effect on the local economy. That's why the city of Nottingham is putting so much emphasis on district heating. Better still, it also creates local jobs."

Councillor Graham Chapman, deputy leader of Nottingham City Council

are cheaper to maintain than the gas boilers that many of these homes were using. Maintenance costs were reduced from £140 per year to £40 - £50 per year.

Another aspect of cutting fuel bills is reducing an area's dependence on centrally-generated energy. Recent media coverage on energy has put an emphasis on the public's vulnerability to rising energy costs. Councils can reduce this vulnerability by investing in large scale renewable energy projects, such as combined heat and power plants and district heating.

The largest district heating system in the UK is in **Nottingham City Council.** The heat is produced in an *energy from waste* (EfW) plant and then sold to an energy services company (ESCo) that is wholly-owned by the council. One of the aims of the council's sustainable energy strategy is to gain energy security, in terms of supply and cost. The district heating system provides affordable heat to nearly 5,000 homes and over 100 businesses.

The **London Borough of Tower Hamlets** has invested in the replacement of an existing district heating scheme that was abandoned in the sixties. The Barkantine combined heat and power (CHP) system supplies heating and hot water to around 500 homes. The council estimates that around 80 per cent of the residents at Barkantine receive state benefits. The district heating scheme provides them with affordable heating and hot water. Tower Hamlets estimates that each household saves two tonnes of CO2 each year and since 2001 each household has saved approximately £1,000 on fuel bills.

"Retrofit is possibly the area we can make the biggest impact for our residents and in relation to climate change. Retrofit will help to make the cost of living affordable and provide our residents with warm and comfortable homes. Retrofit is also an important driver for the economy and we are proud in Cornwall to have excellent ground source heat pump businesses."

Councillor Julian German, Cabinet Member representing Roseland (where some of the retrofit has taken place)

"The recent government decision to permit local authorities to sell renewable electricity is a massive opportunity, both financial and environmental. It gives them the chance to build a strong and secure local production capacity that will help to protect the local authority and their taxpayers from future energy crises, as well as making a useful contribution to renewables on a national scale… [It] makes good financial sense too, creating a lucrative new income stream that can be used to finance other energy or environment projects, support core services or keep council tax low."

Councillor Neil Harrison, assistant executive member for sustainability at Bristol City Council

Sustainable energy can create local jobs

Local authorities can invest in large-scale renewable energy projects strategically. By assessing the opportunities for renewable energy in your area and talking to local businesses, authorities can choose the technologies that will help create local markets and jobs.

Barnsley Metropolitan Council has enabled a small wood-chip supply business to start up by making a commitment to consider biomass for all new and refurbished businesses. The council powers its own depot with wood chips from its parks. They estimate that 180 jobs have been created in their supply chain (not all jobs are in Barnsley). The biomass boilers are used in homes and buildings and reduce the cost of fuel bills.

In a similar project, **Suffolk County Council** has installed 20 wood-fired boilers in schools and offices. Initially, the council was buying pellets from Canada, Ireland and Eastern Europe. By working in partnership with local companies Suffolk developed a supply chain. There are now two Suffolk-based companies making pellets for council supply and delivering to other customers as well. This has created 40 jobs in East Anglia in the wood fuel industry.

Sustainable energy cuts carbon emissions

As the previous examples have shown, councils have led on renewable energy projects for a variety of motivations – cutting fuel bills, earning money and creating jobs are just a few. All of those examples are also cutting carbon emissions.

For councils who are required to participate in the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, cutting carbon emissions is a financial imperative. Under CRC, the cost of carbon dioxide emissions has to be paid in full at about £12 a tonne. **Worcestershire County Council** estimates that this will cost them £500,000 - £600,000 per year. About three quarters of their emissions are from their schools estate.

The **London Borough of Islington** is in the process of creating a borough-wide district heating network. They have a target to reduce carbon emissions by 40 per cent by 2020. The network will provide heat to over 700 homes and two leisure centres. It is estimated to reduce carbon emissions by sixty per cent and residents' heating bills by 40 per cent, saving them around £200 a year.

Many local authorities have done studies on where their carbon emissions come from.

"As a politician I have witnessed at first hand the material benefits brought to householders, to council tax payers and tenants – lower costs, less noise and cleanliness.

"Alternative fuel has to be a 'no brainer' with fossil fuels in decline, being harder and more costly to reach, not to mention bringing the attendant problems of waste, noise and pollution. But the important point is that this is not an abstract concept or laboratory experiment. Biomass is alive and happening now in our borough and it is mainstream. It is ordinary people, not just the enthusiasts, who embrace it."

Councillor Stephen Houghton, Leader of Barnsley Council

Housing is usually a very high contributor to emissions in a local authority area. Before renewable energy measures can be installed it is important to ensure that the home or building is energy efficient.

An assessment of **Stockport Metropolitan Borough Council's** carbon footprint showed that housing is the borough's biggest carbon emitter. The majority of the housing stock will need to address energy efficiency measures. Stockport developed a planning policy to require, where reasonable, any retrofit projects to look at energy efficiency measures for the remainder of the house. The applicant would not be required to undertake the measures if it would cost more than 10 per cent of the overall project costs, or take more than seven years to pay for itself in energy savings.

"We have a biomass boiler at County Hall. It's still significantly cheaper than using gas and obviously it's less carbon. Reduction in carbon is necessary for the environment as well as saving money in terms of using less energy. So biomass is, I think, a major way forward, particularly in places like Worcestershire where there is a significant number of trees."

Councillor Anthony Blagg, Cabinet Member with responsibility for waste and sustainability

Helen Franklin at the Lower Reule anaerobic digestion complex

Section 2: what are my options?

How do you know whether to go for solar panels or district heating? There are many factors to consider – funding eligibility, geographical constraints and opportunities, community acceptance and more. This section outlines how you can assess your renewable energy opportunities and prioritise specific projects in an energy strategy.

Energy opportunities mapping

Energy opportunities maps, or energy maps, are the spatial representation of where sustainable energy is likely to be feasible in an area. They can be used to assess capacity through consultation with the community and developers, to identify deliverable energy projects and when preparing energy strategies and planning policies. Several local authorities have developed these strategies as a part of their planning policy evidence base. They have also been developed at a sub-regional and regional level to understand cross-boundary opportunities.

Energy maps are normally GIS (Geographical Information System) based. They can show information on heat density for district heating, wind, biomass, solar, hydro, energy from waste and other sustainable energy resources. Information on energy is shown alongside details of existing and future development that could be used to make some strategic energy projects viable.

Stockport is part of the **Association of Greater Manchester Authorities** (AGMA) which recently commissioned a 'decentralised and zero carbon energy planning study'. Alongside this sub-regional study, Stockport funded a locally specific study of energy opportunities in the borough. The study was deliberately widened from just planning policy evidence to address carbon issues across the council.

The result of the study is a range of policies for the council in relation to energy. The core strategy has an overarching principle on climate change and states that “making and enabling the best use of renewable energy sources is a key objective for the Core Strategy”. More detailed policies are complemented by an energy opportunities plan showing a spatial representation of the area’s potential for sustainable energy.

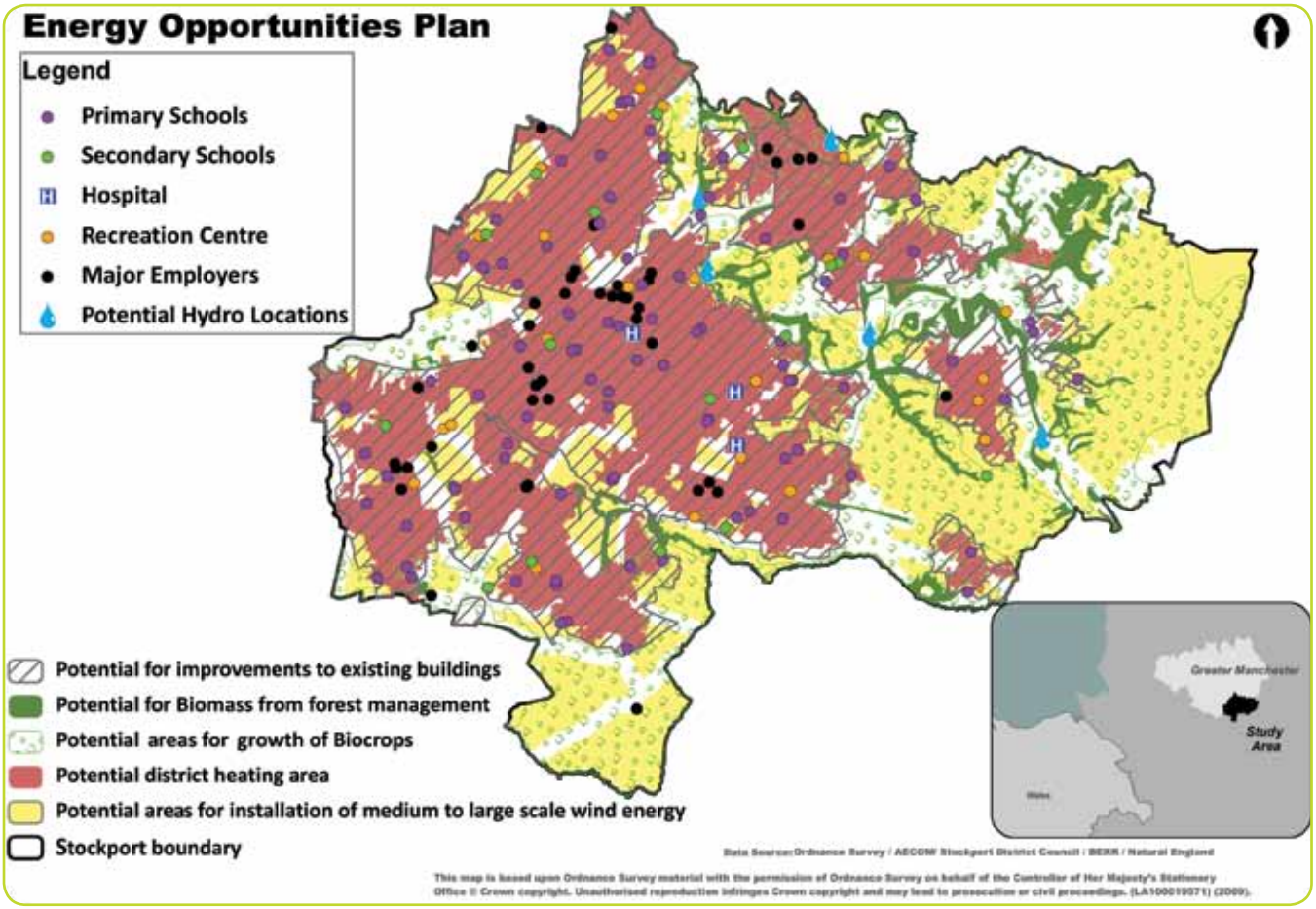
Having an evidence base of the sustainable energy opportunities in the area means that Stockport is enabling community groups or developers to more easily identify energy projects. The council are looking at doing additional feasibility and viability studies that would be of further assistance to groups that want to implement low carbon development.

The initial costs for these studies are not usually covered by grants so this is a significant contribution from the council in supporting energy projects.

Energy options appraisal

Following on from an energy opportunities map, authorities can start to narrow down their options, identify potential project developers and prioritise projects. For example, the Stockport energy opportunities study identified projects that community or commercial developers may be interested in progressing. The local authority may take an enabling role in some projects and a more active role in others.

An energy options appraisal compares in greater detail some of the energy solutions that come forward in the energy opportunities mapping exercise. It would usually include a ‘business as usual’ case to compare the costs of using traditional energy technologies against the sustainable energy options. An options appraisal allows you to evaluate simple payback periods and the cost-effectiveness of specific energy options. This process broadly assesses the technical and financial feasibility. The detailed work comes at the next stage.



Energy Opportunities Plan, Stockport Metropolitan Borough Council Core Strategy, June 2010

Technical and financial feasibility studies

After identifying a potential renewable energy project it may be necessary to undertake a feasibility study to determine whether it is technically feasible and financially viable. These more detailed feasibility studies are done by the project developer to assess one technology option. They look at site requirements, development phasing, whole-life costs and revenues, specific technical solutions and more.

The **City of London** undertook a feasibility study for their large-scale community energy system which is made up of a central power station and a district energy network. The natural gas-fuelled power station provides heat and cooling to nine of the city's properties. It was vital to gain a detailed understanding of building energy demands and to carry out a careful economic appraisal at the outset. They found that nearby buildings could act as 'anchor loads' – using high amounts of heat and electricity at different times of the day and night. This had a huge impact on the overall viability of the scheme.

More information on energy mapping, options appraisal and feasibility studies is available on the Compare renewables web resource, including links to more detailed guidance.

Creating an energy vision and strategy

Once you know what your opportunities are, it is useful to test these with the community and other interested parties. Local authorities can use energy maps to talk to residents, community groups and developers about the potential for local energy projects and to develop a shared energy vision. This helps councils to identify projects that already have local buy-in. These projects can then be prioritised in an energy strategy with a plan for how they will be delivered. An energy strategy can also help guide growth decisions for the future and can be linked to the local development framework.

Nottingham City Council used the Nottingham Energy Strategy to examine every option for low or zero carbon energy in the city. The strategy was developed for the council by the Nottingham Energy Partnership. After assessing the opportunities for low or zero carbon energy, the partnership was able to identify and prioritise investment opportunities.

Nottingham's Energy Strategy's main aims are to tackle fuel poverty, reduce carbon emissions, gain energy security (in terms of price and supply) and prepare for the decline of oil availability. It also outlines how Nottingham's renewable energy generation targets can be met. The energy strategy provides a foundation for Nottingham's sustainable future.

Officers used the energy strategy as evidence to show why Nottingham's district heating scheme was the best sustainable energy option for the city. Councillors needed to be convinced that district heating was a viable project. The energy strategy compares the network proposal to other energy options. It was clear from this analysis that district heating was the fastest and most effective way to increase sustainable energy sources in Nottingham.

Cllr Becket outside the anaerobic digestion unit at Lower Reule

Section 3: what have leading councils learnt from energy projects?

Councils that have already developed sustainable energy projects have learnt ways of improving the process. The lessons from the case studies on the Compare renewables resource are summarised in this section.

Insulation comes first

It's not worth installing renewable energy technologies to heat or power buildings with poor insulation.

A member of Carrick Housing explaining how to use a ground source heat pump in a home

The Energy Saving Trust estimates that householders can save £110 to £375 annually from cavity and solid wall insulation respectively. Loft and floor insulation result in similar fuel bill savings. These savings equal or beat all of the figures that this publication showed for householder savings from renewable energy installations. The bottom line is clear, insulation comes first.

The walls at **Howe Dell School** are so thick that mobile phones do not work inside the building in certain places. This means that the money spent on their ground source heat pumps will not be wasted through poor energy efficiency.

The schools and councils in our case studies that have installed solar photovoltaic panels all said that they are not worth installing without other measures such as:

- loft and cavity wall insulation
- energy-efficient lights and appliances
- communicating the most efficient way to use electricity in the building.

Start small then grow

Sheffield City Council found that very large projects can start small. Sheffield began as a connection between a council incinerator and local flats and has now grown to one of the largest district heating networks in the UK. It has taken decades for the project to reach its current size. By building a strong business case, and delivering consistent value for money, Sheffield found that connections to the network quickly multiplied.

Cover all your bases for planning permission

When councils apply to their own planning committee for permission they cannot appeal the decision. **Bristol City Council** applied to its own planning department for permission to erect two wind turbines on council land. They were very detailed in their research and preparation. It took three years to get from the original impact assessment to submitting the planning application.

Leicester City Council finds that objections and comments will come in from a wide spectrum of people with regard to a planning application. For its anaerobic digestion plant, Leicester found it helpful to involve third parties like the Environment Agency and Friends of the Earth as well as the planning authority. They recommend encouraging these groups to talk to you about the development.

When **Suffolk County Council** was working on its wood-fired boiler project, they found that it was useful to involve planners from day one. Planners can tell you what information they need, how to present it and how to demonstrate that you've thought through all of the requirements.

Planning services can also help secure funding for renewable energy projects or make sure that new developments connect to schemes. For example, **Nottingham City Council's** planning policy will encourage connections to their district heating scheme from new developments within reach of the extensions.

Think through the funding and renewable energy incentives carefully

Bristol City Council recommends evaluating the impact of retiring renewables obligations certificates (ROCs) and when it may be necessary to do so. Under the current Carbon Reduction Commitment Energy Efficiency Scheme, organisations cannot claim the carbon credits for generating renewable electricity if ROCs or the feed-in tariffs are claimed. Bristol decided to own its wind turbines and claim ROCs as that worked out better financially. But they can retire the ROCs if the balance changes.

Use organisations that you can trust for advice or installation

When Barnsley Council was developing its biomass project it had its own in-house expertise. Barnsley recommends asking these questions of anyone who you might bring in to give you advice:

- How many real schemes have you done other than feasibility studies?
- How many are actually now working sites?
- Can you provide names and addresses of your previous customers?

If they cannot answer those questions satisfactorily, do not use them.

Several local authorities recommended talking to professional networks that offer advice, such as the combined heat and power association (CHPA).

For PV on schools, **Okehampton College** recommends using established companies who have experience working in schools, liaising with staff, and the right sort of public liability insurance. That way, the council will not have to act as an intermediary between the installation company and the school.

"Don't be lured into doing so-called 'free' solar PV schemes. Look at managing and going out to tender yourself for these installations. If you have 'free' solar panels on the roof you're not going to get the revenue from the feed-in tariff. If councils go out to tender and put them in themselves, then they can realise a big revenue benefit. And it can be at no net cost to them as a council, because the payments on the capital borrowing will be met by the feed-in tariff."

Councillor Andrew Cooper, Kirklees Council

Work out your supply chain at an early stage

For a biomass boiler project, work out your supply chain before you take on a project like this. **Suffolk County Council** also recommends working with suppliers so that they can manage their businesses sustainably. Suffolk found that supply cannot be done on a one-off contract basis or a yearly contract. They always look for guarantees of quality and delivery rather than the lowest cost.

Remember that technologies can be flexible

Officers at the **City of London** know that even large combined heat and power systems are flexible and can adapt to changes in fuel prices and availability. The Corporation's system runs on natural gas and a small amount of oil, but could switch to biogas or other fuels if that becomes a more effective option.

Similarly, **Sheffield City Council** pointed out that district energy networks are adaptable. Some of the buildings connected to their district energy scheme have requested cooling as a further service so their private sector partner, Veolia, is now investigating how it can offer chilling to its customers.

Do a detailed feasibility and economic assessment

The **City of London** project benefited greatly from a detailed understanding of building energy demands and a careful economic appraisal at the outset.

Nottingham's project started with a full assessment of the city's potential that considered all options for low or zero carbon energy generation. This allowed them to properly identify and prioritise the district heating scheme.

Hull City Council pointed out that different renewable technologies suit different types of buildings. They recommend picking the appropriate technology for a site for the right reasons. For example, for ground source heat pumps you must check that the water conditions and ground conditions are suitable.

Work with residents and keep the public informed

When preparing for their district heating scheme, LB Islington found that getting leaseholders on-side early was very important. Officers at Islington also think it is important to make clear to residents that there will be no work done to individual homes.

Leicester City Council kept the public informed about plans for an anaerobic digestion plant. They ensured that the public were made aware of what is going on and what to expect. Throughout the procurement process they:

- publicised all council reports
- gave details of the scheme
- had a road-show around the area where the mechanical ball mill was built
- involved local press and radio
- involved the local tenants' associations.

When it comes to energy from waste, **Newcastle-under-Lyme Borough Council** found that communication is very important. Officers said that residents often think councils collect waste separately but take it all to landfill or incineration. The more you can explain to residents how it is being used and what the benefits are, the more they take part. The council believes that more people may have taken part sooner if there had been more communication.

Similarly, **Cornwall Council** advised others to make sure tenants are given the proper information at the outset. When you are trying to persuade tenants to have a renewable energy system installed on their home (such as heat pumps or solar panels), make sure that you are armed with all the key facts about they fuel bill savings they can make.

Before installing the solar photovoltaic systems, **Kirklees Council** said it was important to get in touch with tenants well in advance to let them know when the installation was going to take place. This allows you to make arrangements for special cases or if tenants are going to be away. The housing association in Kirklees found that in circumstances where tenants were very sick they needed to provide respite care while the installation work was carried out.

Both **Cornwall** and **Hull** found that it was very important to teach residents how to properly use a heating system operated by a ground source heat pump. Show the tenant how to use the system efficiently and then get them to show you. If you do that, you will get more take-up and the tenant will get more out of their heating system. They also suggest providing easy-to-use guides with pictures.

"...It is also in our experience very important to bring the community with you in respect of all the planning issues etc, and to keep them fully aware of all the whys and wherefores of what you're actually doing."

Councillor Gwilym Butler, Shropshire Council

More information is available in the individual case studies on the Compare renewables website.

The Nottingham combined heat and power centre, courtesy of the Nottingham Energy Partnership

Glossary

Anchor load
A large heat load which could connect and potentially provide an early income to a district heating project by purchasing heat.

Biomass
Biomass generally refers to technology that is fuelled by organic material to generate electricity and or heat. Biomass fuels include: energy crops, woody material from the timber industry and forestry, some agricultural residues and waste streams.

Carbon Reduction Commitment (CRC) Energy Efficiency Scheme
A mandatory scheme for large public and private sector organisations that aims to improve energy efficiency and cut carbon dioxide emissions. More information is available on the Department for Energy and Climate Change (DECC) website.

District heating
A system for distributing heat generated in a local centralised location for residential and commercial heating requirements.

Energy from waste (EfW)
Energy from waste produces energy directly through combustion, or produces a combustible fuel through a chemical process. Secondary by-products are often produced which have additional uses.

Energy Services Company (ESCo)
A business providing a broad range of energy and carbon management solutions, including the design and implementation of energy-saving projects, energy conservation, power generation and energy supply.

Feed-in tariffs (FITs)
The tariff provides microgenerators (up to five megawatts) with a guaranteed income for 20 or 25 years for the energy they generate and feed into the electricity grid. More information is available on the DECC website.

Fuel poverty
A household is in fuel poverty if more than 10 per cent of the householder's income is used on fuel bills.

Green Deal
"…a framework to enable private firms to offer consumers energy efficiency improvements to their homes, community spaces and businesses at no upfront cost, and recoup payments through a charge in instalments on the energy bill." (DECC 2010). More information is available on the DECC website.

Kilowatt (kW)
A unit of power equal to 1,000 watts. A megawatt (MW) is equivalent to 1,000kW.

Renewable heat incentive (RHI)
This incentive has not yet been introduced and the new Government is considering its options. Its launch is planned for June 2011. It has superseded the Low Carbon Buildings Program which is now closed to new applicants. Anyone who has installed a renewable heat producing system after 15th July 2009 will be able to claim RHI from June 2011. As there is no upper limit to the size of the heat equipment eligible under the RHI, schemes may range from individual dwelling or business to community sized district heating facilities.

Solar photovoltaic panels
Photovoltaic cells convert sunlight directly into electricity. PV can be installed on roofs, facades, car parks, railway embankments, vacant land or fields. Small systems are also available for use on street lights and road signs, for example.

Standard Assessment Procedure (SAP)
The Government's assessment procedure for rating the energy performance of dwellings. It is used to show that a dwelling is compliant with Building Regulations.

Warm Front
This scheme "installs insulation and heating measures up to the value of £3,500, or £6,000 where oil central heating or alternative low carbon technologies are recommended… It is for people on certain disability or income-related benefits." www.direct.gov.uk 2010

The terms in this glossary are from the online resource, Compare renewables.

Appendix: grants, loans and incentives for energy projects

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Grants								
Carbon Emissions Reduction Target An obligation on energy suppliers and generators to reduce CO_2 emissions from **households** through grants and other offers for energy efficiency and generation technology.		✓	✓	✓	✓		✓	✓
Community Energy Saving Programme (CESP) Funded by energy suppliers and generators up to December 2012. Supports **microgeneration** in deprived communities on a street or neighbourhood basis – community groups; housing associations; and local authorities.	✓	✓	✓	✓		✓ [1]	✓	✓
Community Sustainable Energy Programme (CSEP) Run by BRE as an award partner of the BIG Lottery Fund. Up to £5,000 or 50% project costs for feasibility studies and **microgeneration** for community based organisations	✓	✓	✓				✓	✓
Bio-energy Capital Grants Scheme Funded by DECC provides funds for local authorities and communities.				✓	✓	✓	✓	

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Grants (cont)								
Carbon Trust Offers loans and grants to public sector organisations for **energy advice, feasibility studies** (Design and Strategic Design Advice) **and projects** (Salix)	✓	✓	✓	✓	✓	✓	✓	✓
EDF Green Fund Grants for feasibility studies (up to £5,000) **small scale energy projects** (up to £30,000). For local authorities, Registered Social Landlords (RSLs), and community groups.	✓	✓	✓	✓	✓	✓	✓	✓
European Local Energy Assistance (ELENA) Funding from the European Commission and EIB. Up to 90% funding for **buildings and infrastructure**: feasibility and market studies; business plans; energy audits; contractual arrangements; and other assistance necessary for the development of Investment Programmes.	✓	✓	✓	✓	✓	✓	✓	✓
Regional Improvement and Efficiency Partnerships (RIEPs) Funded by CLG. REIPs aim to support local authorities improve services. Detail will vary by region but could be a source of funding for sustainable energy **advice or support** rather than for installing the technologies themselves.	✓	✓	✓	✓	✓	✓	✓	✓

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Grants (cont)								
Renewable and Low Carbon Planning Performance Agreement programme Aimed at local planning authorities and their development partners who wish to pursue a PPA for schemes which incorporate renewable technologies and/or a low carbon approach to development. Provides **consultancy support**. Currently a pilot for 12 schemes below 50MW at pre-application stage.	✓	✓	✓	✓	✓	✓	✓	✓
EU Framework Programme 7 (FP7) Money available to fund demonstration and deployment projects	✓	✓	✓	✓	✓	✓	✓	✓
European Industrial Initiatives Part of the European Strategic Energy Technology Plan (SET-Plan). Provides support for **research and innovation** where barriers scale of investment and risk can best be managed through collective action: solar, wind, bioenergy, nuclear fission, carbon capture and an EU electricity grid.	✓	✓					✓	
Loans								
Salix Finance Not for profit company providing finance for revolving funds or interest free loans to accelerate investment in energy efficiency technologies across the UK public sector. Designed for **smaller projects** or as a contribution towards larger projects	✓	✓	✓	✓	✓	✓	✓	✓

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Loans (cont)								
Joint European Support for Sustainable Investment in City Areas (JESSICA) Developed by European Commission and EIB. This is a more flexible way of using ERDF. Enables member states to establish revolving funds and leverage private finance. Will not be considered as public sector debt. Projects (not just energy) must be part of a development plan. Likely to fund **larger projects**. UK examples: £100m London; £100m North West; £15m East Midlands.	✔	✔	✔	✔	✔	✔	✔	✔
Debt financing Loans from banks or other financial institutions may be available for **all size of project**. The Carbon Trust also offers interest free loans from £3,000 to £100,000.	✔	✔	✔	✔	✔	✔	✔	✔
Prudential Borrowing Local authority debt financing from the Public Sector Works Board. Rates of interest are significantly lower than market rates reflecting the financial soundness of most local authorities. Suitable for **low risk assets, generally with a value below £20m**. District heating is ideal.	✔	✔	✔	✔	✔	✔	✔	✔
Equity financing Finance provided by investors in return for a stake in the project. Suited to **larger projects**.	✔	✔	✔	✔	✔	✔	✔	✔

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Loans (cont)								
European Investment Bank The EIB operates as a bank and raises the bulk of its resources on the capital markets on favourable terms, which it passes on to its borrowers. The EIB's shareholders are the EU Member States. It has invested considerable sums in sustainable energy across the EU from **micro-finance upwards**.	✓	✓	✓	✓	✓	✓	✓	✓
Green Investment Bank £1bn seed funding announced by government in the 2010 spending review. Likely to provide a source of **capital funding** for sustainable energy projects. From around 2014 borrowers can be local authorities, local banking intermediaries, energy utilities, energy services companies, or public or private corporate investors.	✓	✓	✓	✓	✓	✓	✓	✓
Pay as you save (pilot) Loan to **individual properties** for energy efficiency and generation. Repaid over longer period based on utility bill savings. Demonstrates emphasis on loans linked to payments for generation (eg feed-in tariff) EST conducting £4m pilot in Birmingham, Sutton, Sunderland, Stroud, Surrey and Sussex. No technologies are specifically mentioned but likely choices set out here.	✓	✓	✓	✓			✓	✓

	Solar PV	Wind	Hydro	CHP	Energy from waste	District heating	Biomass	Heat pumps
Incentives								
Feed-in tariffs Funded by energy suppliers and generators for **renewable electricity projects up to 5MW**.	✔	✔	✔	✔ (elec)	✔ (elec)		✔ (elec)	
Renewable heat incentive Funded by energy suppliers and generators for **renewable heat** projects. It will begin operation in June 2011. Details to be confirmed.				✔	✔	✔		✔
Renewables Obligation The RO is the government's main mechanism for supporting **large scale generation of renewable electricity**.	✔	✔	✔	✔ [2]	✔ [2]		✔	

1 Connection to district heating networks

2 Only biomass elements of the waste are eligible

Notes

Local Government Improvement and Development
Layden House
76–86 Turnmill Street
London EC1M 5LG

Telephone 020 7664 3000
Fax 020 7664 3030
Email info@local.gov.uk

www.local.gov.uk

Local Government Group

The Local Government Group is made up of six organisations which support, promote and improve local government.

Local Government Association
Local Government Improvement and Development
Local Government Employers
Local Government Regulation
Local Government Leadership
Local Partnerships

INVESTORS IN PEOPLE | Silver

Printed on 75 per cent recycled paper.

For a copy in Braille, Welsh, larger print or audio, please contact us on 020 7296 6880.
We consider requests on an individual basis.

L11-52