

CLASP. Environment
Resilience
Resources
& Support



CLASP BRIEFING:

Financing Large-Scale Investment In Renewable Energy

Making It Happen In Your Local Authority

www.claspinfo.org

Introduction

Local Authorities are working with reduced budgets. There is very little grant funding available yet many Local Authorities are implementing renewable energy schemes. Why are they doing this? And how do they achieve it? This briefing explains the benefits, finance options and practical steps to take for Local Authority investments in renewable energy projects.

The overarching lesson from officers interviewed for this briefing is ‘just get on with it’ – the business case is still a good one for the right technologies in the right place.

Quick Links

- 1 Essential Background
- 2 Making Your Project Happen
- 3 Financing and Ownership Options
- 4 FAQs
- 5 Resources

This briefing has been produced by CLASP, Warrington Borough Council and Quantum. It is part of a series of resources from CLASP (the local area climate support programme) which can be found at www.claspinfo.org/resources.



1 ■ Essential Background

What kind of renewables?

There are a range of low carbon and renewable energy technologies. Local Authorities are investing in medium and large-scale wind turbines, large solar farms, solar PV on roofs, and district heating schemes.

The type and scale of your renewable energy project will depend on your Authority's:

- Attitude to borrowing
- Attitude to risk
- Capacity to manage a project
- Availability of land or other suitable assets (not necessarily your own)

Examples include:

Bristol:	2 x 2.5MW wind turbines at Avonmouth – installed
Aberdeen:	CHP district heating scheme – installed
Rochdale:	Wind and solar generation – planned, pilot turbine installed
Telford:	4MW solar farm – permission granted
Swindon:	40MW solar farm – awaiting planning decision
Peterborough:	Three solar energy parks of 8MW, 26MW and 49MW – awaiting planning decision
Warrington:	PV on social housing – implemented, PV on industrial park & heat network – proposed
Stoke on Trent:	45GWh/year district heat network – proposed with £20m support through a City Deal programme
Knowsley:	Low carbon energy network for Knowsley Industrial & Business Park – proposed
Preston:	3 x 3MW wind turbines – proposed



CASE STUDY

Bristol City Council Wind Turbines

Bristol is the first Local Authority to own and develop wind turbines. In 2014 two 2.5MW turbines began generating electricity at Avonmouth. The £8m scheme was financed through prudential borrowing. It is expected to generate around £1.3m each year from FITs, Levy Exemption Certificates and selling the electricity. The turbines are expected to generate 14,400 MWh per year – enough to power over 3,400 homes. The development work was funded by the council's own Energy Service which procures energy for the council and recycles any internal surplus into funding sustainable energy projects.

For further information contact:

Indira Norton, Energy Management Officer –
indira.norton@bristol.gov.uk.

Photo: Bristol City Council



Benefits

Installing large-scale renewable energy schemes is a way Local Authorities can:

- Generate a long-term source of income (from government incentives for renewable energy and from selling electricity)
- Reduce the amount spent on energy bills (offsetting cuts in central government funding)
- Reduce fuel poverty
- Reduce CO₂ emissions and tackle climate change
- Support the local low carbon and renewables supply chain
- Generate revenue to enable start-up for more complex energy schemes
- Fund energy efficiency schemes in the community and for businesses
- Involve the local community and businesses in the energy debate and solutions



Photo: Warrington Borough Council

Warrington Borough Council's Solar Partnership

Warrington Borough Council went into partnership with social housing provider Golden Gates Housing Trust to install solar PV systems on over 600 homes. The scheme was developed while Feed In Tariff (FITs) rates were high, and the government proposal to reduce these dramatically could have halted the project. But the team held their nerve and managed to install the panels before the rate change came in. The Council used prudential borrowing to fund the scheme and expect a surplus of around £3m over the 25 years of the scheme, while Golden Gates tenants are seeing reductions in their electricity bills of between £112-£160 per year.

Dave Cowley, Head of Service, Housing Standards & Options Division, Warrington Borough Council considered it “**too good an opportunity to miss**” and was able to push the project through as a pilot study with the support of their Climate Change Manager and Financial Projects Manager.

Changes to the FITs rates in 2012 paused the programme, but PV system prices have since reduced such that **schemes are again viable** and Warrington Borough Council is continuing to invest in PV on social housing.

For further information contact Dave Cowley: dcowley@warrington.gov.uk.



The Financial Case for Renewable Energy Investment

The return on investment depends on the individual scheme. Some example costs and incomes are shown below:

- Preston's proposed 3 x 2.5MW turbines should cost £13m to install, and are expected to bring in a return on investment of around 13%; or around £1.7m of net income per year.
- A typical under-5MW solar farm would cost £6-8m to install and would generate a cumulative net profit of around £5-6m over the 25 year life of the project.

Getting Started

This is different in every Authority, but **director-level support is vital to getting the initial buy-in from Members**. In some cases the initial driver has been from the Leader or Cabinet Member for Housing or Environment. In others, officers identified opportunities based on existing evidence or policies (e.g. solar PV survey, climate change strategy that includes renewable energy generation, assets management plan, or a renewable energy capacity study).

Other catalysts can be:

- A new initiative on fuel poverty or regeneration
- An approach from a private sector energy developer
- An **assets review** identifying land or assets that could be a valuable resource for renewables generation – what looks like a bit of grazing land might be a wind or solar site that could generate a good income for your Authority

“Be clear about what your project is supposed to achieve – then you can ensure you keep that in mind throughout the development process.”

Rachel Waggett, Warrington Borough Council.

There are two separate processes which then need to be carried out in parallel:

- Making your **renewable energy project happen**
- Planning the **financing and ownership model**

These two processes are covered in the following sections.

2. Making Your Project Happen

There are many stages from concept to delivery for renewable energy investments and a range of stakeholders to take care of, along with the technical, financial and legal aspects of developing and delivering a project.



Stage 1 – Getting Started and Getting Support

Set out your motivation, primary benefits and key people:

- Why do you want to do this?
- Who do you need to convince?
- What are your policy hooks?

At this stage you are aiming to gain enough support to allow you to spend time working up a more detailed project.

A pilot project can often be a way in, enabling you to deliver at a small scale and gain trust and results as a way to introduce bigger ideas.

Get the idea across in a **concept note** or **presentation at a meeting of senior managers/elected Members**. This initial discussion should **reference existing policies, strategies and studies**, including existing renewable energy capacity studies or energy plans. LEP strategies may also provide evidence for you to secure initial support. Rochdale’s wind energy strategy document provided the arguments to support their project.

It can be useful to **use examples and experience from other Local Authorities** at this stage. Knowsley Borough Council brought in a consultant to present the benefits and outline experience from other councils.

CLASP’s Elected Members Briefing 3: Local and Low Carbon Energy Opportunities outlines benefits and case studies. Other examples can be found on the LGA website and via APSE Energy (see Resources for more details).



Stage 2 – Initial Feasibility Study and Spotting Opportunities

To get an overall idea of what may be suitable for your area, an initial feasibility study will scope out what **assets** your Authority has that might be suitable for renewable energy, what types of **technology** might be suitable and a **cost-benefit analysis**. It should consider a range of technologies, identify potential sites and exclude sites that are clearly not suitable. It is likely to cost around £2-10k depending on the scale. The study should provide sufficient information to decide whether to commission and fund a detailed feasibility study. It will also help focus the specification for a detailed feasibility study.

HINTS AND TIPS

Don't limit your study. A site that is not suitable for wind might be great for a solar PV farm.

Land designated for housing in the long term might be suitable for a wind turbine which will have paid for itself by the time housing is due to be built.

Look wider than your own direct assets as there may be opportunities to work with partners such as housing providers, commercial developers, business parks and other public sector and community organisations. This is vital for heat networks, but also possible for PV, wind and hydro.



An alternative route is to look for **opportunities** and investigate these as they arise:

- Is the Local Authority investing in any buildings or sites that have the potential for renewable energy?
- Is your local housing provider about to repair or replace a number of roofs?
- Are new developments planned that could incorporate renewables in which the Council could invest?



Photo: Warrington & Co – <http://www.omegaopportunity.com/gallery/masterplan/>

Warrington Borough Council – Investing on Private Developments

Warrington Borough Council is planning to install a 7MW PV system on the roofs of new distribution buildings on the Omega mixed-use development, owned by a private company.

The system will be financed and owned by the Council, through a wholly-owned Energy Services Company set up for the purpose. The roof space will be leased from the developer for an annual fee, and electricity generated will either be sold directly to the grid, or to the building occupiers at a commercially attractive rate, with increases tied to inflation. The Council will receive income from the national renewable energy incentives (either FITs, Renewable Obligation Certificates or Contract for Difference). The developer sees benefit from the scheme in being able to offer tenants lower cost electricity and “green credentials” at no capital cost, while receiving an income from the roof lease.

The £8.5m scheme will be funded through prudential borrowing over 25 years and will generate a surplus for the Council over its lifetime which will be used to support other residential solar projects combating fuel poverty, and other Council service delivery.

The opportunity was identified by the Council’s Finance Manager during early discussions on other planning-related issues with the Developer. It will take approximately one year to complete from initial discussions to installation. Political sign-off of the project is expected in the summer of 2014. Once the financial model has been proved with this system, WBC is planning to install 3-4 further schemes.

For further information contact: Rachel Waggett – rwaggett@warrington.gov.uk.



Stage 3 – Feasibility Study

To identify which energy technologies are right for your area a detailed feasibility study will be needed. It should focus on one or more specific sites/technologies identified in the initial feasibility study, screen out further unsuitable options, include technical onsite evaluations, for example for access and grid connection, identify key risks and develop outline business cases for the investment, including financial modelling for income generation and loan repayments.

In short it will equip you with information to enable your Authority to decide whether to go forward with the project – developing a planning application, procuring and delivering the project or taking forward the next stage of a complex project.

How much does a feasibility study cost and how do we fund it?

Feasibility studies are generally paid for from your own funds. If you go on to develop a renewable energy scheme, you would aim to recoup these costs within the project business plan. Some developers may offer to provide low-cost or free feasibility studies, but this may tie you into a deal with the developer which will reduce your returns later. For heat networks, pre-feasibility, masterplanning and feasibility part-funding is available (see Resources).

Some feasibility cost examples:

- Rochdale's feasibility study cost £19k to examine the top 30 sites out of over 100 identified in an initial desk review
- A large wind feasibility study may cost between £20-£30k
- For a 10MW solar farm expect to pay between £5k-£10k depending on grid connection and site complexity
- Heat networks mapping and feasibility will be staged and costs range from £17k-£50k depending on the scale and complexity of the project
- Calderdale Council has approved £10k to support the development of Calderdale Community Energy community-owned small wind and hydro projects.

Lessons from other Local Authorities:

- Don't over promise at this stage – there are a lot of variables including energy prices, FIT changes, technology price changes, exchange rates etc.
- Provide a clear business plan but don't oversell the return on investment
- Be clear on the risks and the points at which these will be fully defined or mitigated
- Try not to focus in too much detail on the finance options and legal issues at this stage if your project requires planning permission. You need to provide enough information to show a clear business case, but don't get bogged down in the fine details if you can help it. However, these are new projects for many Local Authorities so you can expect a higher degree of scrutiny on your project
- Talk to your finance and legal teams early on – they will help
- It helps to put finance and legal in touch with other councils who have done this before – this can provide reassurance. CLASP can help you with contacts for this. Contact aisla@claspinfo.org for help.



Rochdale Council Renewable Energy Programme

Barnaby Fryer, Sustainability Team Leader, already had support from Cabinet for Rochdale's Green Action Plan, the council's sustainability strategy, which identified a range of renewable generation opportunities in the borough.

“The support of our Leader, his personal commitment and leadership has made a huge difference.”

Rochdale Council commissioned ASC Renewables, a Manchester-based renewable energy developer, to provide an initial scoping study which identified opportunities for large, medium and small wind generation on council-owned sites. This high-level analysis identified a pool of potential sites for medium and small turbines worth taking forward to a more detailed feasibility study. Thanks to successful efforts to reduce the council's CO₂ emissions, Barnaby was able to use an underspend in the budget for carbon allowances under their Carbon Reduction Commitment to fund a £19k feasibility study to examine the 30 top sites. This identified nine sites and a Renewable Energy Programme was launched.

Funded through the Capital Programme (using prudential borrowing) it will install three medium sized turbines (500 kW) and eight small ones (11 kW), the first of which began turning in March 2014. Rochdale has now procured a Framework, available to all Greater Manchester Local Authorities, for a technical advisor for wind energy programmes. Four companies have been appointed to this framework, with ASC being appointed by Rochdale to continue to work on the Renewable Energy Programme.

Barnaby's advice to others is to expect a high level of scrutiny from colleagues and Members because it's so new to Local Authorities, despite wind being a proven technology that developers have been profiting from for over a decade. He found that taking Finance, Legal, and Procurement colleagues to visit other Local Authorities already doing such projects was very useful in getting their buy-in. He also recommends including a principle of community energy in any policy, and not closing doors by focusing on one type of technology – a wind opportunity that fails might give rise to a solar PV opportunity, so call your policy 'Renewable Energy' rather than 'wind or solar'.

For further information contact: Barnaby Fryer – Barnaby.fryer@rochdale.gov.uk

Photo: Rochdale Online –

<http://www.rochdaleonline.co.uk/news-features/2/news-headlines/86321/wind-of-change-blows-through-rochdale>.





Stage 4 – Project Approval and Development

Assuming your feasibility study produces some suitable sites and viable business cases for renewables technologies you will need to examine these and put forward a scheme for approval. Depending on your project, you might want to seek approval in principle for different stages, with approval for phase 1 in detail. If your scheme is a big one, you'll need approval for significant spending such as for developing a planning application.

You will need approval of a costed delivery plan with delegated Authority to a key Cabinet Member, directorate or department. Depending on the type of renewable project you are delivering, at this stage you will be looking at planning applications (if required), finance options, legal issues and procurement as well as agreements with partners (if any) and community engagement.

From now on this is no different to a standard construction project that your local Authority is delivering.

Developing a Planning Application

A Local Authority cannot appeal against its own planning decision, so it is vital to get the process right. This will include community consultation and clear explanations of the benefits of the scheme to the community need to be explained.

How much does taking schemes through planning cost? Some rough examples again:

- A 500 kW turbine might cost between £25k-£75k to take through the planning process (depending on whether the site needs an Environmental Impact Assessment). It can take two years at best, up to four at worst.
- A 2.5 MW turbine might cost around £550k to take through planning and will take around one year post planning consent to install.
- A 5-10 MW solar farm might cost £25-£30k (including EIA) and take around nine months to get through planning.

As with feasibility studies, this is 'at risk' finance and borrowing is not available for it. However, once you have planning permission, the land itself will be worth four times its previous value, so even if your Authority does not go ahead with installing the renewables, it will have a valuable resource to sell on. Once this stage is complete, as with any other development project, you can move ahead to secure finance for your project, as the risk profile changes at this stage.

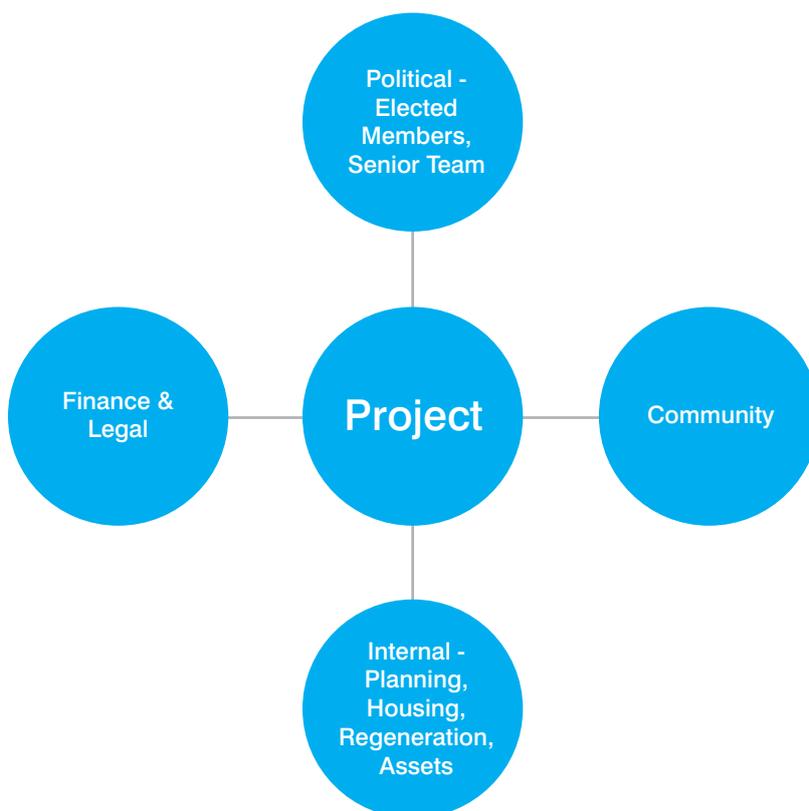
Lessons from other Local Authorities:

- *“Hold your nerve and keep people updated regularly to keep up the momentum”*
Mick Lovatt, Preston City Council
- For large scale wind and solar, Natural England are a statutory consultee – it's vital to liaise closely with Natural England and get your bird studies right
- Clearly explain the benefits to the community, illustrating how much income you can generate for council services is key



Juggling All The Stakeholders During The Process

There are a lot of different people to keep informed and involved in the process of developing your project – many of these can provide support and backing, while others need to be kept convinced of the benefits of investing time, effort and finance in the project. Key stakeholders include:



Changes in Government Policy

HINTS AND TIPS

Renewable energy has been a political football and changes in government policy have caused uncertainty in renewable energy markets. All this can rattle the nerve of decision-makers. Anyone working on a renewable energy project needs to ensure the business case is robust enough to withstand changes to subsidies, and you should assess different scenarios while developing it. It can also take time for political rhetoric to become policy, and sometimes this never happens. Ensure you are ready to handle policy changes and include this in your approach to risk management in your project. Having a strong case for your project, that is embedded in council policies with a clearly explained business case, community benefits and ongoing engagement will help you deliver.

3. Finance and Ownership Options

Each local Authority has its own management style and own approach to finances, investment, borrowing and risk.

Local Authorities have a range of finance options open to them, ranging from their own capital funding to EU grants and loans, private finance, green/ethical banks, DECC funding for feasibility studies, to partnerships with the private sector, community sector or other public sector organisations. Significantly, Local Authorities can access prudential borrowing at favourable interest rates (currently around 4% for 20 year borrowing), which is lower than the return that can be achieved through renewable energy investment.

You will need to find the most appropriate source of finance for your renewable energy projects. Local Authorities interviewed had huge support from their finance and legal teams within their authorities in developing their project concepts and business cases. Finance officers have access to legal and financial advisors for larger projects.

Prudential borrowing is the most popular way to start up solar PV, wind and some district heating projects. It is simple, Local Authority finance officers are familiar with it, and the low interest rates make your return on investment very attractive.

“Show me another legal way for a Local Authority to get a 13% return on investment!”

Prudential Borrowing

The Local Government Act 2003 allows an individual Authority to borrow money to fund capital spending subject to plans being prudent, affordable and sustainable in line with the Chartered Institute of Public Finance and Accountancy (CIPFA) Prudential Code. There are no limits to a Local Authority’s borrowing. However borrowing must conform to the guidance set out in the prudential code and must be affordable.

The **Public Works Loan Board** is a statutory body whose function is to lend money from the National Loans Fund to Local Authorities and other prescribed bodies, and to collect the repayments. This finance is relatively easy to access and has been the most popular source of funds over recent years.

As with any form of loan, interest rates vary over time and depend on the level of risk. Contact your finance team who will be able to advise you on this!

However, for Local Authorities for whom prudential borrowing is not politically acceptable, the finance markets (e.g. banks, venture capital funds, specialist funds, private individuals) will provide capital investment as they have done for private renewables developers over the last few years. This will give you a much lower return on investment, but you'll still be able to deliver a project.

To implement your project you will need two kinds of finance:

1. Development Finance – for initial feasibility, detailed feasibility and the planning process. This 'at risk' finance is usually paid for from within the Local Authority and borrowing is not available. For heat networks you can currently apply for part-funding for this stage. Partner organisations may be able to provide their own finance or access grants for this but you may lose some ownership of the project.

(Think of this as the money you'd pay for a survey on a house you are hoping to buy or start-up finance if you were setting up a new business.)

2. Capital Finance – for the construction and installation of the renewable energy technologies. For smaller schemes this might be funded from your capital programme, or an existing Invest to Save scheme. Once the major project risks have been reduced (e.g. when planning permission is granted) you should be able to borrow for a viable project without difficulty at this stage, because it is low risk finance.

(This is equivalent to the mortgage on a house or secured loan on a profitable business.)

Options for capital finance include:

- **Prudential borrowing:** a familiar funding system for Local Authorities and borrowing costs, at around 4% for 20 years, will be far lower than any other loan, providing higher project returns.
- **Capital receipts:** finance from sale of other Local Authority assets if you can get it earmarked for a renewables project.
- **Private investors:** borrowing 75% of the capital might cost around 6.5% (senior debt) but borrowing the 25% remaining will be 12-15% (mezzanine debt). The combined interest rate of around 9.5% may only be viable for very large schemes.
- **Green Investment Bank:** has a core focus on energy efficiency, offshore wind and energy from waste and it lends at commercial rates. It has a remit to leverage finance for sectors including biomass power and renewable heat. It is currently looking at market failure in renewable energy finance by the banks so it is worth keeping an eye on what they can offer Local Authorities, or consortia of Local Authorities.
- **Bond issues:** (usually for very large projects, over £150m) or Consolidated Bonds – this is another way to raise money which is paid back over a fixed period. Consolidated bonds can replace or simplify previous bonds, or take advantage of lower interest rates. Energy for All recently raised a Bond Issue on Westmill Solar for part of the finance required, which will be paid back within five years.
- **Community share offers:** via a separate company or community energy cooperative. This can be a good way to provide direct benefit to the community and involve them in the scheme. To secure investment you should expect to provide a return on investment of at least 4%; some schemes offer 6-9%.
- **Joint Ventures:** a developer, land-owner or community organisation may be willing to invest and can share the cost, risk and income from the project.

Capital finance for a large project can be blended from a number of different sources, e.g. prudential borrowing combined with a community share offer.

You do not need to make a decision on the financing mechanism or structure at the start of the project – this can be addressed during the development of the business case.

Preston City Council Turbines

Preston City Council is on course to submit their planning application for three 3MW wind turbines on council-owned reclaimed land. The process to get to this stage has taken around two years.

Mick Lovatt, Corporate Director Environment, kicked off the idea with a concept note to Cabinet, after the rules changed to allow Local Authorities to sell retail electricity. Cabinet liked the idea of generating their own electricity – more than enough to power the council's needs – and to make a decent return on investment to fund council services.

A small development fund allowed Mick to commission a consultant to work with him, the planning team, legal, estate managers and energy team to put together a business case. Once approved, a £300k project budget was set aside to get the project to planning stage. This covered technical surveys, bird migration surveys, flora & fauna, radar, wind speed and the Environmental Impact Assessment. In February 2014, a windspeed test mast was put up on the proposed site.

The capital costs of £13m (or lower, as since the budget was drawn up grid connection costs have come down) will be covered by a combination of council reserves and prudential borrowing. Should rates change by the time the project comes to fruition, other options such as shareholder offers for local councils, Lancashire County Council and UCLAN or a community share offer will be considered.

At today's rates the £13m investment would see a 13% return on investment – very favourable compared with the 6.9% returns the council sees on their best property investments. Mick says that once the cabinet had backed the plan, getting everyone on side was no challenge. The main challenge he faces now is keeping his nerve as the project progresses. Regular updates are important in keeping stakeholders up to date and onside. Would he do it again? "Yes, we have to capitalise on the opportunities to earn real money – the technologies allow it, we have council land and free wind."

"If we can get the blades turning on these wind turbines, we don't just stop there, this is the first step to tackling fuel poverty and establishing an Energy Services Company (ESCO) generating renewable energy from a range of sources."

For further information contact: Mick Lovatt – m.lovatt@preston.gov.uk.

CASE STUDY



Map: Place North West – <http://www.placenorthwest.co.uk/news/archive/11837-preston-to-trial-city-wind-power.html>.

Telford Solar Farm

Telford & Wrekin Council has just received planning permission for its wholly owned solar farm which is expected to be a 4MW installation. It is expected to generate enough power for more than 800 homes and will be funded through prudential borrowing. The Cabinet supported the development of the project with a £50k investment from its Invest to Save fund to prepare the planning application and conduct community engagement/exhibition.

Contact: Fliss Mercer – felicity.mercer@telford.gov.uk or Sharon Carrington – sharon.carrington@telford.gov.uk.



Ownership

The level of ownership and control you want over the project determines the type of finance available, the level of risk taken on by the Authority but also the financial returns.

Increasing Investment and Control	Owner	Owner-operator or Contracted operator	Increasing Risk
	Partnership/ Joint Venture	Joint Energy Services Company Partnership with Community Organisation, Social Housing Provider or other Public Sector Partnership with Private Developer Varying levels of investment and control	
	Asset Lease	Owned and operated by external organisation (private, other public sector, social or community organisation)	
	Enabler	Support to private, community or other organisations to develop their own schemes	



ESCo – Energy Services Company

The Local Government Act 2000 created a power enabling Local Authorities to set up local energy service companies (ESCos). These are organisations that finance, own and/or operate energy supply infrastructure, and charge for delivery of energy services such as heating. The ESCo can invest in energy efficiency measures or renewable energy generation and recover the cost over time through charges for its services.

Local Authorities are increasingly using ESCos to deliver renewable and low carbon energy schemes, and ESCos are particularly well suited for power and heat networks which include providing services to a range of clients and which involve partners. Several Local Authorities have already set up ESCos, either as an in-house service or a separate organisation, such as Bristol Energy Services, Islington Energy Services, and Aberdeen Heat & Power.

ESCo governance can vary from Joint Venture between the Council and a private partner; to being wholly managed in house, privately owned and operated on behalf of the Local Authority or community owned.

An ESCo can be useful to coordinate different renewable energy projects and to provide a vehicle to bring in additional funding/investment or to recycle surplus funds into energy efficiency or carbon reduction schemes.

HINTS AND TIPS



Deciding on the Right Finance and Ownership Structure

Do you have access to capital?	Do you have assets suitable for renewable energy?	Are non-council assets suitable for renewable energy?	Are you able to take on the full risk of a large renewable scheme?	Do you have strong political support?	Do you have the capacity to manage the scheme?	Is community involvement or social benefit important?		
Yes	Yes	No	Yes	Yes	Yes	No	Large scheme e.g. wind (MW), solar farm (MW) heat network	Own Development
Yes	Yes	No	No	Yes	Yes	No		Partnership with private developer
Yes	Yes	No	No	Yes	Yes	Yes		Partnership with community energy or social housing provider
Yes	No	Yes	Yes	Yes	Yes	No		Lease assets from site owner for own development
Yes	No	No	Yes	Yes	Yes	Either		Provide investment finance to schemes in other areas
Yes	Yes	No	No	No	Yes	No	Small scheme to demonstrate benefits	Own Development
Yes	Yes	No	No	No	Yes	Yes		Partnership with community energy or social housing provider
Yes	No	No	No	No	No	Yes	Focus on Energy Efficiency instead	
No	Yes	No	No	Yes	No	No	Small or large scheme	Lease your assets to a private developer
No	Yes	No	No	Yes	No	Yes		Lease your assets to a community energy organisation
No	No	Yes	No	Yes	Yes	Either		Provide enabling support to help another organisation develop the scheme

Financial and Development Support from Other Local Authorities

Swindon Commercial Services, wholly owned by Swindon Council, acts as a developer. They have structured a number of ownership models that address the numerous ways in which a Local Authority can own and invest in solar parks, ranging from 100% self-funding to innovative partnerships with the private sector and community. Underpinning these investment models are OJEU frameworks ensuring best value is always attained. These models also provide an opportunity for Local Authorities to invest in renewable energy schemes beyond their own borders.

Plymouth Energy Community (PEC) Solar Share Scheme

PEC is installing solar PV panels on around 20 schools and community buildings. The community share offer scheme means Plymouth residents and businesses have become investors in the scheme, with a minimum investment of just £50 and maximum investment of £20k. Investors are offered an average rate of return of 6% with potential for this to rise to 9.4% with Enterprise Investment Scheme tax relief. The share offer closed in April 2014 at £602k, well over the original target of £500k.

Council backing with a £500k loan from an existing invest-to-save capital pot meant PEC could begin installing panels (pre-registered to benefit from higher FITs) on schools over the Easter break. PEC will receive FIT income and are selling power to the schools at less than the commercial rate. Over the project’s 20 year lifetime PEC expects to make a £900k surplus which can be invested into future projects tackling fuel poverty and further renewables schemes.

Paul Elliott of Plymouth’s Low Carbon Team says the catalyst for the project was the Council’s stated aim of generating its own energy and establishing a community co-operative. A call for founder members in March 2013 brought 70 people to the group and it was up and running by July 2013 with a start-up loan and a service level agreement with the council for its staff to deliver some of PEC’s services (PEC does not employ any staff; it has a voluntary board). PEC now delivers a range of services from energy switching advice to ECO for private households, energy champions and a new fuel debt advisory service.

“Within one year PEC has delivered far more than we could have achieved working alone as a council.”

<http://www.plymouthenergycommunity.com/>

For further information contact: Plymouth Council’s Low Carbon Team – Paul Elliott paul.elliott@plymouth.co.uk.



Photo: Plymouth Energy Community
<http://www.plymouthenergycommunity.com/invest/share-prospectus>

Knowsley Industrial and Business Park Energy Network

Knowsley Metropolitan Borough Council is supporting the development of an Energy Network to supply heat and electricity to Knowsley Industrial & Business Park (KIBP) as part of the Council's regeneration strategy. The Council has funded the feasibility study, securing grant funding from the Heat Network Delivery Unit Round 2 (see Resources). KMBC is providing officer time to set up and manage the project, bring together relevant partners, work with businesses on KIBP, provide help with the planning process and secure legal and technical advice for the project. The benefit to the Council is not income in this case, but is the regeneration of a business park and delivery of an energy network to benefit businesses.

The feasibility study proved that decentralised energy was commercially attractive for both suppliers to deliver and operate the network and businesses to buy the energy. The Council is currently procuring a Strategic Partner to develop and operate the scheme and is engaging businesses to secure their interest in joining the network.

Key lessons so far:

- Good business engagement is critical and the Council is managing this
- Keeping elected Members and directors informed on their low carbon strategies and on successes has helped to maintain the strong political support
- Getting proper technical and legal advisors and using them has allowed the Council to provide effective support to the project.

For more information contact: Rupert Casey, Head of Environmental Services – rupert.casey@knowsley.gov.uk.

www.knowsley.gov.uk/pdf/EB18_KnowsleyIndustrialParkEnergyNetworkFeasibilityStudy.pdf



Photo: Knowsley Council

4. FAQs



Q: Is it easier to start with our own assets?

A: Those interviewed would say yes. They suggest start small and prove you can get an income. (This is faster and easier with solar PV.) But be opportunistic and jump on the back of other projects, regeneration programmes, fuel poverty initiatives or available finance.

Local Authorities are more comfortable starting with their own land and assets, but developers say it's not difficult or expensive to secure land.

Q: How long will it take?

A: **Solar PV** projects can start quite quickly and may not even need a planning application if you are putting PV on roofs. For a **solar farm**, you will need to go through planning and full community consultation so expect at least two years.

For a smooth-running medium – large sized **wind** project, you're looking at two years minimum in the planning process. With pre-planning and installation it might take four years, although Bristol for example took almost 12 years from initial concept to generation.

For **hydro**, with the added complication of Environment Agency approval, you will need three to five years.

For **district heating**, you'll be looking at a complex project encompassing other partners, procurement, planning policy and probably a strategic project partner, which is unlikely to be completed in less than four years.

Q: Does it really pay?

A: Yes, that is why we've seen investment in renewables for years, and why community schemes work well. Local Authorities with prudential borrowing abilities, and therefore access to much cheaper finance than through the markets, can expect very good returns on investment.





Q: Can we sell the energy generated cheaply to householders or businesses?

A: In order to sell the electricity you generate, you must have a connection to the buildings supplied, or be a registered energy supplier. For electricity, you can sell to any building connected to the scheme, which will either be one building directly supplied by the technology, or a group of buildings connected by a private wire. They will need a contract to buy the electricity from you. For properties not connected to your scheme, the usual route is to sell electricity directly to the national grid, and use the income to provide community benefits. A new scheme allows Local Authorities, Housing Providers and Community Groups to become accredited energy suppliers, which will allow them to sell to individual householders or other buildings via the national grid. The first such scheme has been set up by Ovo Energy <http://www.ovoenergy.com/communities-partner>.

For heat, the buildings must be physically connected to the supply by means of a heat network to sell the heat.

Q: How do we deal with moving targets and finances?

A: Your renewables investment business case will involve moving targets, such as adjustments to the Feed in Tariff rates and changes in interest rates, which will only be fixed when the deal is signed. If you delay, you could miss out on favourable rates. You should model the effect of different rates and costs in your business plan. Hold your nerve, and just get going are key lessons here. Rochdale's approach has four stages starting with a small turbine and leading to installing a 500KW turbine. Warrington have developed an approach to business case development which breaks up their borrowing for different project components with repayment periods that vary over the project timescale; this can enable projects to go ahead. As long as the loan can 'wash its face' they are able to go ahead with developments.

Q: Should we develop a large ambitious programme?

A: This depends on your Authority. If you try to develop a complex project with many partners and mixed funding or special finance vehicles, you may end up delivering nothing for a long time and losing confidence, momentum and political support.

Achieve your big plan in small staged steps: if you start with a small project, you will have money coming in, a project delivered, and you and your team will have valuable experience and confidence to deliver more projects. Getting your foot in the door can be the best way forward. But be aware there is a risk that one small project may be seen as having "done renewable energy".

District heating schemes are by nature complex and involve many partners, so you are unlikely to be able to start small.



Q: What's the risk?

A: There are different kinds of risks, and these will be assessed during the project development.

Renewables technologies are not new and neither is large-scale investment by Local Authorities: but the combination is relatively new. As more Local Authorities take the plunge, experience is building up and being shared. If your finance and legal teams are concerned, putting them in touch with authorities who have already been through the process can provide reassurance.

The main financial risk is in the development costs for feasibility and planning stages.

Delivery risks are those typical of any construction project, and usually relate to delays in installation or increased costs, which can affect the projected returns. There is a risk of it not generating what you expected and this should be modelled while developing the business case.

The income from renewable energy depends on government support over a long time (FITs, ROCs, CFD). Changes in policy or the generation rates offered can have a serious impact on the business case, so these need to be monitored and the potential impacts of changes should be assessed. The risk on borrowing will be carefully managed and modelled to ensure even in a worst case scenario the loan can be repaid.

What is the risk of doing nothing? As one officer said "What's the risk of the government making even greater cuts in 2015? Pretty high. We can make up this income by investing in our assets. And what is the risk of ever-increasing energy prices? High, and this provides an even better business case to invest in renewable energy."

Q: Our Local Authority is very risk averse: what should we do?

A: If your local Authority wants to avoid any risks, it can contract the whole project out to a developer to take forward, at their risk, but you would then expect to make much less income on the project as a result. This might be motivated by a wish to reduce CO₂ emissions rather than wanting to generate an income for the Local Authority. It might also be because you don't have staff capacity to manage the project development.

Q: We are facing cuts and are cutting our services, how can we justify this?

A: Taking steps to invest in renewable energy now can bring an income stream that can safeguard some of your council services. Your ability to borrow at very good rates (4%) means that with some effort, you can create a long term income stream, and send out positive messages through your Members and to your communities.

5. Resources



Resources

CLASP – the public sector sustainability network, has a range of **Renewable Technologies Resources** including presentations and case studies from authorities that are already investing in technologies.

For presentations and information from a 2014 workshop where Local Authorities discussed their **investment models and installations** see: www.claspinfo.org/resources/financing-large-scale-renewables.

For information on technologies see: **CLASP Low Carbon Planning Pack** www.claspinfo.org/planners-support-pack which includes a number of technical guides and case studies. For an **introduction to a range of technologies** for a less technical audience, such as Members and communities see: <http://claspinfo.org/cheshire-renewables-handbook> or <http://claspinfo.org/lancashire-renewable-factsheets> or www.claspinfo.org/resources/public-sector-biomass-guidance.

For guidance on **delivering local energy networks** see: <http://www.claspinfo.org/resources/local-energy-networks-executive-summary-and-full-report>.

APSE Energy – is a collaboration of Local Authorities with the aim of promoting decentralised energy generation, distribution and supply through ‘municipalisation’. All Local Authorities can join APSE Energy to enable the financing, procuring and developing of green energy projects and to develop a hub of Local Authorities providing and accessing support, guidance and expertise. North West members include Lancaster City Council, Preston City Council and Knowsley MBC as well as 30 Local Authorities from around the UK. Membership is £2k for APSE members and £5k for a non-members. For more information contact Mark Bramah, MBramah@apse.org.uk.

Other Local Authorities – Some Local Authorities are creating companies to sell their services in developing installing and managing renewable energy schemes; these include Peterborough, Islington and Swindon Commercial Services.

Swindon Commercial Services (wholly owned by Swindon Borough Council) are energy developers and have structured a number of ownership models that address the numerous ways in which a Local Authority can own and invest in solar parks, ranging from 100% self-funding to innovative partnership with the private sector and community; underpinning these investment models are unique OJEU frameworks ensuring best value is always attained. For more information contact James Owen, jowen@swindoncommercialservices.co.uk.

Heat Networks Delivery Unit funding from DECC will meet 67% of the estimated eligible external costs of heat mapping, associated master planning, developing technical proposals, financial evaluations, appropriate governance procedures and processes, project management and any other agreed appropriate works to allow the preparation of investment documents, business plans, financial models etc. which facilitate the installation of new heat networks and the improvement and/or expansion of existing heat networks. Local Authorities will be required to provide the other 33% of funding. Rounds 1 – 3 have been allocated to Local Authorities and remaining grant funding, worth £7m in total, will be allocated through subsequent funding rounds, running to March 2015.

More information on: www.gov.uk/government/publications/heat-networks-funding-stream-application-and-guidance-pack.

The unit has published a Heat Map for the UK <http://tools.decc.gov.uk/nationalheatmap/> which shows that nearly 50% of heat demand in England is concentrated with enough density to make heat networks worth investigating.

Further Reading

Sustainability West Midlands and EST produced the *West Midlands Local Authority Low Carbon Economy Programme Local Authority funding guide*
<http://www.sustainabilitywestmidlands.org.uk/wp-content/uploads/Local-Authority-Funding-Guide.pdf>

Scottish Future Trust report “*Commercial Aspects of Local Authority Renewable Energy Production*”
http://www.scottishfuturetrust.org.uk/files/publications/Commercial_Aspects_Local_Authority_Renewable_Energy_Production_Main_Report.pdf



www.claspinfo.org