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The road to recovery briefings:

Briefing 5: Setting up energy services companies (ESCOs)

Integreat Yorkshire

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Introduction

Energy Services Companies (ESCos) are a way of providing renewable energy that can be faster, more focused and more flexible than alternative arrangements.

An ESCo is a vehicle for renewable energy schemes that reduces commercial risk and can be tailored to local circumstances. They are suitable for a wide range of technologies, from combined heat and power in residential or commercial buildings, to CO2 reduction through energy efficiency measures.

There is no standard ESCo model. An ESCo often comprises a number of private and public sector partners, as well as local residents, who come together to deliver a range of integrated energy services.

An ESCo can be faster and more focused because it is purpose driven – its primary task is the provision of green energy, and it will be run by people with specialist knowledge. It might link to a project or organisation that has wider aims, but as a standalone entity it can avoid becoming sidetracked.

It is more flexible because it can be designed to fit the unique circumstances of each scheme, often taking different views towards risk and an acceptable rate of return.

ESCos can adopt a wide range of legal structures: limited company, limited liability partnership, charitable status, industrial and provident society, or community interest company. They can be privately or publicly owned or operate as public-private partnerships.

The choice of structure is determined by issues such as funding sources, attitudes to risk, and the objectives of the scheme. For example, industrial and provident societies and trusts tend to be suited to smaller community-led projects.

ESCos are becoming increasingly attractive to the public and private sectors and to local communities as a means of lowering energy bills, reducing fuel poverty and cutting CO2 emissions. However, they are not a magic wand - an ESCo cannot make a unviable project viable.

While public bodies such as local authorities have led the way in developing ESCos, they also offer an option for community-based projects. This is because they can spread risk between different partners – community groups, public authorities and commercial backers – and can operate at a lower rate of return than would be deemed acceptable by a commercial enterprise.

They may be able to tap into investment from public sources as well as private backers. In an ESCo, energy assets can become a standalone investment opportunity, at arm's length from any wider development scheme they may be part of. By removing energy related topics from a developer's balance sheet, they create a new investment criterion, opening the door to alternative solutions and technology choices.

Community-based ESCos are at an early stage. The skills, incentives, government policy and financial backing required to boost their progress and take-up all need developing.

However, this approach is starting to win government support. ESCos' partnership ethos and approach to commercial risk places them in a good position to attract public funding.

Recent developments

Changes to building and planning policy are shifting the climate in favour of community-based ESCos. In particular, the government's Carbon Emissions Reduction Target (CERT) programme offers opportunities to access funding for locally based energy generation, such as biomass community heating systems.

The CERT scheme (see link, below), has a budget of £1.5bn in the three years to 2011, and is designed to tackle fuel poverty and improve energy efficiency in residential properties.

In addition, some local authorities require new developments to generate at least 10% renewable energy on site, under the 'Merton rule'.

Growing interest among policymakers in community-based and cooperative housing models, such as community land trusts (see link), offer further opportunities to install renewable energy systems in small-scale residential developments.

Case Study

Lowestwood Mill in Huddersfield is a century-old, six storey, Grade II listed building that has become a renewable technology success story.

Lowestwood - commonly known as Titanic Mill because it was built in 1911, the same year as the doomed ship - has been turned into a mixed use residential and commercial complex. The developer, Lowry Renaissance, joined forces with energy consultancy ESD to achieve a carbon neutral design.

Several energy efficient technologies were incorporated into the building as part of the conversion work, including high levels of insulation and a mechanical ventilation system that circulates air around the interior.

The developers built in a 50kW photovoltaic (PV) system and biomass combined heat and power (CHP) to provide heating and electricity to 130 apartments and several ground floor businesses. This saves around 600 tonnes of carbon emissions per year.

An ESCo named Mill Energy Services (MES) was set up in 2003 to run and maintain the system and to generate revenue to cover ongoing costs. MES is wholly owned by the mill's residents and commercial tenants. Surplus energy is sold to the national grid, with the revenue paying for the system's maintainence.

Each apartment owner has one share in MES, which contracts out the day-to-day management and maintenance of its equipment. This arrangement means the users of the energy retain control of the energy assets.

As the system's design locks residents into receiving their energy from a single source, the organisational set-up prevents an external company taking control.

The ESCo was set up to show that such an arrangement could be commercially viable in high density developments, and in the hope that the model would be used in future public and private schemes.

Capital costs were a significant hurdle. They were met in large part by Lowry Renaissance, as it believed the project was the future of building development and provided valuable experience. Lowry Renaissance claims residents' water, heating and electricity bills are lower than in comparable conversions without energy-saving technologies.

The installation of the solar PV system was supported under the European Commission's SunCities demonstration programme and the former Department of Trade and Industry's PV major demonstration programme. Funding for the wood-fired CHP boiler came via the bio-energy capital grants scheme.

The project also formed part of Kirklees Council's wider SunCities project, in which solar thermal systems were installed on a range of private and public housing developments.

unlikely to take a chance on a speculative scheme. SCHRI grants of up to £100,000 can make all the difference, enabling a small project to make important progress at a stage when it might otherwise have stalled.

SCHRI's flexible approach has enabled it to support a wide range of renewable energy projects that vary greatly in size, need and technology. It was initially handed around £3.7m of funding over three years but the programme has been extended in recognition of its success.

Expert view: Tim Sutherland, Future Energy Yorkshire

As a nation, we are responding to climate change by setting challenging targets for renewable energy and carbon emissions reductions, and backing these up with policies and measures to drive through a transformation in the way we generate and use our energy resources.

The Renewable Energy Strategy sets out an unprecedented challenge for the UK, stating that 15% of all the UK's energy should come from renewable sources by 2020. To put that in perspective, in 2006 our capacity was believed to be just 1.5%. If we are to meet our 2020 target, billions of pounds must be invested in new energy projects over the next 12 years.

As a region, Yorkshire and Humber has set its own target of a 20-25% reduction in greenhouse gas emissions by 2016, and has identified minimum targets for renewable energy capacity at local authority level.

These targets cannot be met without considerable effort from the public and private sectors, and also at community level. The scale of change required in current infrastructure cannot be overstated.

Energy supply companies are accountable to the shareholders and are typically focused on delivering attractive returns. This marginalises technological solutions that could deliver greater CO2 benefits and better energy services for customers.

Over the years, various communities – groups of residents, housing associations or local authorities, sometimes in partnership with energy companies – have sought to develop new models that re-balance these priorities in favour of the public good. Generically, these models have come to be known as Energy Service Companies (ESCos).

Encouraging community development and/or ownership of sustainable energy projects, where the benefits of developments to both individuals and communities are tangible, can be particularly useful in:

- increasing installed sustainable energy capacity;
- promoting cheaper and better technologies through private investment;
- helping overcome problems and conflicts;
- providing an attractive financial return to those involved;
- creating economic benefits for the local area, including jobs, services and production of affordable energy; and
- promoting individual commitments to low carbon living.

Checklist

1. Understand the context. ESCos have been in existence for several years, though their increased use at community level is more recent. Stay up to date with the rapidly changing practice and policy in this sector and keep abreast of ways in which communities are taking advantage of the ESCo structure.
2. Be prepared. ESCos are complicated to set up and will face high up-front costs in terms of buying and installing renewable energy technology. Assess the feasibility of your proposed scheme thoroughly. Then access as many different funding sources as possible and examine how funders' priorities fit with those of the ESCo.
3. Make the right choice. ESCos are one way of managing energy projects. Weigh up the exciting possibilities they offer against the alternative models you could use for the

specific circumstances and objectives of your project. Using an ESCo will shape your whole project and will be extremely difficult toalter half way through. ESCos can take many forms - be sure to make this decision based on project-specific factors.

4. Build relationships. There might be a number of partners involved, and you need to be clear about what everyone wants from the project. Use a risk matrix to map out the risks of each stage and define the responsibilities of each partner.

5. Get help. Involving public or private organisations with experience of similar schemes could vastly increase the chances of success. Renewables projects are time consuming and often slow to progress. ESCos will be reliant on a core of committed individuals: consider employing someone at an early stage to drive the project forward and to maintain progress and focus.

National advice and guidance

www.energysavingtrust.org.uk/uploads/documents/housingbuildings/CE179%20-%20Renewables%20updated%20(2).pdf – Energy Saving Trust briefing: Energy services and renewable energy.

www.energysavingtrust.org.uk/uploads/documents/housingbuildings/Annex_B%20-%20case%20studies.pdf – Energy Saving Trust briefing note: Financing community energy schemes..

www.energysavingtrust.org.uk/business/Business/Resources/Publications-and-Case-Studies - briefing notes and case studies on sustainable energy and transport.

www.energysavingtrust.org.uk/business/Business/Local-Authorities/Your-Sustainable-Energy-Strategy/Energy-Efficiency-The-Guide/Energy-Efficiency-The-Guide-England-version/15-Carbon-Emissions-Reduction-Target-CERT-funding - information about funding through CERT.

www.carbontrust.co.uk/Publications/publicationdetail.htm?productid=GPG377&metaNoCache=1 - Carbon Trust. Guidance on procuring energy services to deliver community heat and power schemes.

www.carbontrust.co.uk/Publications/publicationdetail.htm?productid=gpcs403&metaNoCache=1 - Carbon Trust. Energy services contracts in the public sector.

www.tcpa.org.uk/downloads/TCPA_SustEnergy.pdf - Town and Country Planning Association. Sustainable Energy By Design (includes information on the use of ESCOs).

Help in the Yorkshire and Humber region

www.fey.org.uk/site/EnergyServices/ESCOs/LADeliveryFramework/tabid/319/language/en-GB/Default.aspx - Future Energy Yorkshire. Two reports on why and how local authorities can employ special purpose vehicles, joint ventures and ESCOs for delivering low carbon projects.

www.fey.org.uk/site/EnergyServices/ESCOs/tabid/266/language/en-GB/Default.aspx - Future Energy Yorkshire. Information and guidance on ESCOs, including an example risk matrix.

www.energy-help.org.uk – Kirklees Energy Services. Energy savings advice to small businesses and research into renewable energy options within Kirklees, Calderdale and Wakefield.

Other sources of advice and information

www.lep.org.uk/uploads/lep_making_ESCOs_work.pdf - London Energy Partnership: Guidance and advice on setting up and delivering an ESCO.

www.eci.ox.ac.uk/research/energy/downloads/bmt-report3.pdf - Bertoldi, Hinnells and Rezessy: Liberating the power of energy services and ESCOs in a liberalised energy market.

www.energysavingtrust.org.uk/uploads/documents/housingbuildings/Woking.pdf - Case study on Woking Borough Council.

www.chpa.co.uk/news/reports_pubs/Community%20Energy-%20Urban%20Planning%20For%20A%20Low%20Carbon%20Future.pdf - Report for Combined Heat and Power Association. Community Energy: Urban planning for a low carbon future.

www.managenergy.net/indexes/I157.htm - European Commission. ESCO good practice case studies.

www.energysavingtrust.org.uk/uploads/documents/housingbuildings/CE55%20-%20Community%20heating%20-%20a%20guide.pdf - Energy Saving Trust. Community Heating: A guide (covers the role of ESCOs).

www.camphillclanabogan.com/heating.htm - Camphill Community, Clanabogan, Co. Tyrone - biomass district heating scheme.

www.communitylandtrust.org.uk - information about community land trusts.

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