

Unlocking savings: ESCOs, EPCs and EaaS

There are a wide range of energy services on the market, from ESCOs and EPCs, to EaaS. So, how can end users decide the best option for their organisation? Steve Fawkes, founder of EnergyPro, provides an insight

Usually when we talk about energy service companies (ESCOs) we mean companies that deliver energy efficiency upgrades through Energy Performance Contracts (EPCs) that provide a guaranteed level of energy savings over a long-term contract.

One appeal of an EPC is that the capital works can be externally financed by loans and the savings exceed the repayments back to the lender – generating positive cash flow for the client from day one. Because of this financing option EPCs have often been promoted as the answer to improving energy efficiency and as a financing mechanism to increase investment into energy efficiency.

However, EPCs have not grown as much as some proponents envisaged and two realities are often forgotten:

- EPCs are not a financing mechanism themselves, just a particular form of delivery contract
- Despite many attempts around the world to apply the model into the commercial sector the EPC model is largely confined

to the public sector, the Municipal, University, School & Health (MUSH) market in the US, and the NHS and local authorities in the UK

Although excellent in the right applications, EPCs are not the single answer – the ‘silver bullet’ – to address the massive under-investment into energy efficiency that we have.

The past few years have seen innovation in energy service contract forms driven by a number of factors including; realisation that EPCs do not work well outside the public sector, technical innovation, and changing accounting standards regarding balance sheet treatment of assets.

In the US we have seen ESAs (Efficiency Service Agreements), MESAs (Managed Energy Service Agreements) and MEETS (Metered Energy Efficiency Transaction Structure) come to the market. All these have their advantages and can work in different situations but have not yet gained significant markets. The world is changing and it is time to consider how

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ESCOs will need to change.

With the rise of ‘as a service’ models throughout the economy, innovators are developing energy as a service (EaaS) models that could take us closer to the ideal of selling not energy (which no one really wants), but the services which consumers

really want such as heat, coolth, comfort and light.

One of the most advanced areas is lighting as a service (LaaS) where companies such as E-Light in the UK and Lighthouse in Europe provide lighting upgrades to LEDs at no capital cost to the customer. The customer pays a flat fee over an extended period that is less than their existing lighting energy cost and covers capital and ongoing maintenance.

The big energy savings that LEDs bring about make LaaS attractive but the next step is to move away from single technologies to EaaS.

EaaS models are being developed by both SMEs and multi-nationals for different markets from residential to large-scale industrial and commercial. Big utilities, hardware companies and technology companies are all



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working on EaaS models and are converging on the space.

EaaS typically take the form of subscription services, paying a fee for energy services which cover energy supply, capital equipment and ongoing operations and maintenance. Technologies such as combined heat and power, local PV, demand response and micro-grids as well as long-term power purchase agreements from off-site renewable assets can all be combined to produce a more efficient system and controllable cost structure that sits under an EaaS agreement.

The investment into new generation assets and energy efficiency projects, as well as operating costs such as operations and maintenance, are all wrapped up into the service fee.

Clearly issues such as varying demands due to

changes in production or building use or weather conditions, and the vendors need to recover investment, all need to be taken into account in formulating an EaaS agreement.

EaaS models are highly attractive to the technology giants, the so-called FAANGs (Facebook, Apple, Amazon, Netflix, Google) as they could allow them to 'own the customer' in the way that they do with their internet offerings.

The FAANGs can also harness their data analytics skills and harness additional value from the consumption data. Data is an essential component of any EaaS model. The technology companies are well placed to make inroads into the market.

Although the utilities are also developing EaaS models there is no doubt that they

have organisational and cultural issues that impede their diversification into new business models.

EaaS can offer the customer many benefits including; no capital cost, deeper energy efficiency and operational savings, lower risks, improved resilience and off-balance sheet treatment. The latter has long been seen as an advantage but of course it has been largely restricted through changes in the accounting

standards. To qualify for off-balance sheet treatment providers will have to accept higher levels of risk transfer than traditional ESCOs have been willing to accept. Energy efficiency improvements used to be regarded as no or low risk but of course they have a number of risks that can impact performance.

In fact the performance gap on energy efficiency projects can be significant. One implication of this is that ESCOs offering EaaS model will need to minimise and mitigate the risks through standardisation approaches such as the Investor Confidence Project's Investor Ready Energy Efficiency certification system, and consider the use of performance insurance where it is available.

Although the potential benefits are clear, we are clearly in the early days of market development for EaaS offerings. Suppliers are developing and refining their offerings.

Clients in the public sector and industrial and commercial markets need to consider them as a new way of addressing cost, environmental and resilience problems and to demand new solutions that go far beyond the norm. The next few years should see an increase in the use of EaaS models that change the way that people and organisations buy energy and help deliver cost savings and environmental benefits. **te**

“ *The world is changing and it is time to consider how ESCOs will need to change* **Steve Fawkes, EnergyPro**

