



Split-incentives – a Case for the Third Party.

Resolving the landlord-tenant dilemma through energy services.

Introduction

With around 40 % of energy being consumed by the building sector any meaningful climate and energy security strategy must focus on achieving significant reductions in this area. The required technologies are available and have repeatedly been proved to be effective throughout a broad range of case studies. Likewise the arguments for using these technologies are well understood and do not need to be repeated. Despite this take-up is relatively low. Particularly where buildings are being rented or leased the problem of split-incentives (the landlord-tenant dilemma) acts against more efficient buildings.

At the same time the 40 % House report suggests that it may be necessary to provide energy to households on an energy services basis in order to achieve the scale of change necessary.¹ Through the efficient use of heating, cooling and other building systems it is possible to systematically reduce the energy consumption of the building stock. This remains the key sector for successfully reducing emissions. Depending on the model energy contracting can also access private capital thereby reducing the burden of improving energy efficiency on the state. It is therefore in the interests of the EU and member-states governments, if they are to reach the goals that they have set for themselves, to create the necessary framework to allow better take-up of energy contracting.

¹ Bertoldi, P., Hinnells, M. and Rezessy, S., 2006. Liberating the power of Energy Services and ESCOs in a liberalised energy market. Paper to EEDAL 06 (Energy Efficiency in Domestic Appliances and Lighting). London. Available from: www.eci.ox.ac.uk/research/energy/downloads/bmt-report3.pdf.

In this paper we deliver a short description of some of the most common forms of energy contracting, as well as some of the benefits. This is followed by a brief description of some of the major obstacles. Finally we suggest some ways that the EU could help to increase take-up of energy contracting.

Definitions

Energy contracting can be defined as an energy-saving service provided by the contractor to the client und which usually involves an investment.² Contracting provides benefits for the client not only through reduced energy consumption but also by providing know-how and funding, or access to funding. Energy services in this context may therefore include some or all of the following:

- Planning, financing and implementation of energy services;
- Planning, financing and installation/replacement of building systems and/or complementary measures (for example, better insulation);
- Operation and maintenance of building systems;
- Provision of guaranteed savings;
- Processing planning permission or applications for subsidies;
- Other refurbishment measures.³

The savings in the energy costs may be used to pay for some or all of the costs of the energy services. In the case of guaranteed savings the contractor and client can decide on whether or not they share the savings. Where the savings are shared the contract will generally be longer to allow the contractor to recover his investment.

Generally speaking there are four common models of energy contracting, which may also be combined with each other. They are:

² Kristof, K. / Lechtenböhmer, S., 1999. Einspar-Contracting für Fortgeschrittene. Düsseldorf. Available from: www.wupperinst.org/uploads/tx_wiprojekt/einspar-contracting.pdf

³ Bertoldi, P., Hinnells, M. and Rezessy, S., 2006. Liberating the power of Energy Services and ESCOs in a liberalised energy market. Paper to EEDAL 06 (Energy Efficiency in Domestic Appliances and Lighting). London.

- Energy supply contracting: the contractor is responsible for supplying services such as electricity, heat, etc. They are responsible for supplying both the energy required as well as the investment in and operation of the technical systems.
- Energy performance contracting: the contractor assumes responsibility for the operation of the building systems as well as making investments in improving or replacing them where necessary. System operation is improved based on the client's requirements. The main difference to energy supply contracting is that the contractor here usually guarantees a minimum level of savings which he uses to cover the costs of the investments. This means that the contractor must concentrate on achieving the largest possible reduction in the amount of energy and energy costs, whereas in energy supply contracting the contractor may partially cover its costs based on the re-sale of useful energy to the client.
- Financing contracting / Third-party-financing: the contractor assumes the costs of providing technical systems which it then rents or leases to the client. The client is responsible for all other aspects, such as maintenance and energy supply. The advantage for the client is that it is freed from making long-term investments while receiving the use of systems which have been designed to be the most efficient for their needs. As this model is mostly concerned with providing financing it is not usually an area for ESCOs but may be provided by finance and plant engineering companies.
- Technical systems management: the contractor assumes responsibility for operating the building's systems. Through its know-how the contractor optimizes the operation of systems. The contractor does not guarantee any savings and receives a flat fee for operating the systems. The contractor is only responsible for operating the systems and not for delivering services such as heating and light.

Not only energy service companies (ESCOs) but also, for example, companies that offer building systems, energy companies or construction companies may offer energy services. Offering energy services may serve as a sales channel to increase equipment sales, as a value-added service, or to win new customers or keep existing ones.

The Directive 2006/32/EC on energy end-use efficiency and energy services defines energy service companies in Article 3 (i) as:

“a natural or legal person that delivers energy services and/or other energy efficiency improvement measures in a user's facility or premises, and accepts

some degree of financial risk in so doing. The payment for the services delivered is based (either wholly or in part) on the achievement of energy efficiency improvements and on the meeting of the other agreed performance criteria; “⁴

and energy performance contracting in Article 3 (j) as:

“a contractual arrangement between the beneficiary and the provider (normally an ESCO) of an energy efficiency improvement measure, where investments in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement;”⁵

Advantages of energy contracting

Some of the main advantages of energy contracting are:

- *Split-incentives/landlord-tenant dilemma*: where the owner of the building is not also the user of the building then they may not profit from the investment and are therefore less likely to invest, especially if they cannot pass the costs on to the user of the building. Energy contracting solves this problem as the contractor will profit from the investments in energy efficiency. At the same time the user of the building profits from increased comfort and reduced operating costs while the investor profits from a more attractive building. In this way energy contracting turns the problem of split-incentives into a win-win-win solution.
- *Access to financing*: many building operators/users may not have adequate financial resources to invest in energy improvements, even if the payback period is short. Energy contractors can provide the necessary capital. Measures which generate savings can be implemented and then used to pay for themselves through lowered running costs. The contract removes the barrier of requiring up-front investment. The contractor has a vested interest in making savings and can access the required capital. There are also examples of clients using the savings from higher energy efficiency to finance other refurbishment measures.⁶

⁴ DIRECTIVE 2006/32/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC.

⁵ Ibid.

⁶ Piller, S. Berlin's Energy Savings Partnership. Available from. <http://www.ecobuild-project.org/workshop2.html>.

- *Access to know-how:* companies or individuals may not have the necessary skills required to implement adequate, cost-efficient measures. Or the company may have the skills but must concentrate on their core business and is unable to free up the necessary capacity.
- *Realistic payback assumptions:* expectations on how short the period of amortisation must be before an investment is attractive can vary widely. In particular private individuals and companies with a fast turnover rate will want a quick return on their investment. This is one of the reasons why even measures that pay for themselves are not always implemented. For a contractor the amortisation period of energy performance contracting are a known and acceptable factor.
- *Risk-sharing:* the energy contracting model allows the client to share some of the risks involved in making (usually long-term) system investments. Furthermore the fact that the client does not have capital tied up means that they remain more solvent in the short-term.

Challenges and obstacles in Germany

Despite the clear advantages that energy contracting brings there is a relatively low rate of take-up. This is particularly pronounced in the rented residential sector. Despite the fact that Germany has long been recognised as one of the leading countries as regards the implementation of energy services to achieve energy savings and despite the firm desire to increase take up progress has been slow.⁷

It is well understood that energy services offer a way of tapping energy saving potential which otherwise remains locked away. This is shown by the draft coalition agreement of the new government (CDU, CSU and FDP) which pledges the economic one-to-one implementation of the Energy Service Directive (2006/32/EC), as well as minimising barriers in tenancy laws and increasing existing possibilities for commercial Energy Contracting in the rented residential sector. Building measures which serve this purpose must be tolerated and

⁷ Bertoldi, P., Boza-Kiss, B., Rezessy, S., 2007. Latest Development of Energy Service Companies across Europe – A European ESCO Update. JRC Scientific and Technical Reports. Luxembourg. p. 28. Available from: www.energy.eu/publications/LBNA22927ENC_002.pdf.

should not be a ground for rent abatement.⁸ Industry is also firmly interested in making use of the potential that is locked in the rented residential sector; it is estimated that energy consumption in this sector can be reduced by 15 TWh and 3.4 million tonnes of CO₂ can be avoided but to do this requires that the landlord-tenant dilemma be resolved.⁹

There is therefore a broad consensus of opinion that energy services can and must play a significantly larger role in improving the energy efficiency of the building stock – which remains one of the single largest consumers of energy.

However, despite support it is possible that action on promoting energy services at the national level could fail due to pressure from the affected interest groups. Without binding targets the difficulty of reaching a mutual consensus of opinion between politics, the real estate industry and tenant's association, for example, is one that has the potential to delay national debates on the role of energy services in the residential sector indefinitely. If the EU were to set such targets this would add a much needed degree of urgency to the topic.

Energy services therefore offer a realistic approach to funding as well as implementing large-scale energy refurbishments of the housing stock throughout the EU, only failing due to a lack of consensus at the national and local level.

For this reason the TSB makes the following recommendations based on our work in the EU-funded ECO-Build Project including an expert workshop carried out on the 10th of November 2009.

⁸ „Hierzu zählen insbesondere: die marktwirtschaftliche 1:1 Umsetzung der Energiedienstleistungsrichtlinie...[und] (Investitionsanreize durch Änderungen im Mietrecht und im Energiecontracting)“ „Die Hürden im Mietrecht für eine energetische Sanierung zum gemeinsamen Vorteil von Eigentümern und Mietern werden gesenkt, die bestehenden Möglichkeiten der gewerblichen Wärmelieferung (EnergieContracting) im Mietwohnungsbereich erweitert. Baumaßnahmen, die diesem Zweck dienen, sind zu dulden und sollen nicht zur Mietminderung berechtigen.“ p.28. Koalitionsvertrag zwischen CDU, CSU und FDP. 17. Legislaturperiode. 2009. Wachstum. Bildung. Zusammenhalt. Available from: www.cdu.de/doc/pdfc/091026-koalitionsvertrag-cducsu-fdp.pdf.

⁹ ZVEI, 2009. Kernforderungen des ZVEI – Konkrete Forderungen der deutschen Elektroindustrie an den 17. Deutschen Bundestag. Stand: September 2009. www.zvei.org.

Recommendations

→ **A Directive explicitly requiring that the landlord/tenant dilemma be addressed by member states.**

- Member states' attempts to draft balanced regulations on energy services are put under severe pressure from major interest groups, i.e. tenants associations and the real estate industry. The EU is therefore recommended to set clear goals and a timetable for implementing legislation in the member states.
- There are no apparent attempts at cooperation among member-states regarding energy services. It is one thing to have completely different regulatory frameworks in member states for housing and ownership. But there should be common agreement on creating EU-wide regulations for energy services, which could play a key role in achieving many EU goals.
- Though the problem is well-known there has been little effort made to actively address this issue thereby allowing significant energy savings to go unrealised. The problem is that political will at the national level requires support to achieve momentum. The EU can play a decisive role in this respect by passing a new Directive (or, for example, amending the Energy Services Directive) requiring that member-states actively tackle the landlord-tenant problem. Energy services represent one of the most promising instruments for tackling this problem. A binding requirement is necessary to overcome objections at the local and national level.
- Due to the enormous difference in structures and capacities between member-states the Directive should not seek to prescribe too much. It is enough to require member-states to take active measures to solve the landlord-tenant dilemma through energy services. A set of goals should be included to demonstrate that progress is being made.
- Possible aspects which the Directive could also address include possibilities for creating "building pools" in the residential sector, setting maximum cost ceilings to protect clients of energy services as well as the definition and standardisation of products and services.

→ Standardisation of products and services to ensure improved transparency and help reduce transaction costs.

- Smaller projects often can't take advantage of energy services because the transaction costs (i.e. the negotiation of contracts) are too high.
- While the Energy Services Directive (2006/32/EC) defines both energy service companies and energy performance contracting this is of limited practical value. A standardisation of terms and of contracts is required. Standardisation improves transparency for clients giving them a better understanding of what is being offered, which, in turn, contributes to increased demand. Contractors benefit from the reduced transaction costs which standardisation brings. Transaction costs can be a significant factor in the residential sector, reducing the costs increases the percentage of the building stock which can benefit from energy services.
- The EU can help to introduce energy services to a broader range of projects by helping to standardise the industry. A first step is to define and disseminate standard contracts and a range of acceptable values for factoring costs. A further step is to offer impartial consulting specialising in energy services for the stakeholders.
- The "Pay As You Save" model (PAYS – see the Annex for a brief overview)) is one which should be supported. It should be explored to what extent PAYS can also benefit from standardisation. A research project could be initiated to determine, for example, if a standardisation of building types or market segments is advantageous.

→ The introduction of service structures suitable to the residential sector.

- A major obstacle to increased take-up of energy services in the residential sector has been identified as an unwillingness on the part of the client to enter into long-term contracts.¹⁰ For service providers a major obstacle is the lack of stability in the residential sector. By linking energy service contracts to the

¹⁰ EST, Energy Savings Trust, 2004. Energy Services – Qualitative research to inform the development of products designed to promote household energy efficiency. Report prepared by Cragg Ross Dawson for COI Communications on behalf of EST. p. 26. Available from: www.berr.gov.uk/files/file20138.pdf.

building rather than to the owner both sides can benefit. The client benefits as he is free to sell his property, while the contractor benefits as he knows the contract exists even if the client changes. A system such as the proposed Pay As You Save model in England¹¹ or in the United States of America¹² shows how this can be effectively implemented. The collection of fees by the local authority as proposed for the English model also helps to reduce the cost of administering the scheme. The Pay As You Save model should run alongside traditional energy contracting models to allow the greatest investment in energy refurbishments.

- “Pay As You Save” should be supported by the EU as a best practice example. The EU should examine, whether the “Pay as you Save” model can be replicated in other member-states.
- The EU should examine how the scheme can best be implemented and administered. It should be remembered that while the collection of the PAYS Charge by the local authority is regarded as the best solution it may mean an added strain on their resources.

→ **A clear definition of maximum costs for residential clients is necessary**

- Ideally energy savings should be guaranteed so that the refurbishment measures effectively pay for themselves. This may not always be possible. Where savings are not guaranteed there should be a ceiling on the maximum costs that clients of energy services must bear. This will help to counterbalance possible weakening of tenant’s rights (as would be the case in Germany, for example, if legislation required that the agreement of a majority of tenants was required to initiate energy services in rented accommodation instead of the agreement of all tenants as is currently the case).

→ **The efficiency of the entire building stock must be increased.**

- It is not possible to economically refurbish all buildings. Nonetheless every building has the potential to lower its energy consumption and should receive attention. There are two main possibilities for achieving this. On the one hand

¹¹ http://www.ukgbc.org/site/document/download/?document_id=669

¹² <http%3a//www.paysamerica.org/DTEpres.pdf>

it makes sense that building pools are composed of both attractive and less attractive buildings, less attractive buildings are then “carried” by the more attractive buildings. Another possibility is that energy services be offered from a non-profit provider. Where the local authority has the capacity and know-how (for example where “intracting” has already been carried out) then energy services can be offered in order to achieve other goals, such as alleviating “fuel poverty” and reducing unemployment. Refurbishing social housing may mean simply restructuring costs: instead of paying higher fuel costs communities pay for the refurbishment and benefit from lower running costs.

- The EU should support measures taken by member-states which allow improved use of finances. Support for the life-cycle cost of buildings (including both investment and running costs) means support for buildings which are more efficient and often cheaper in the long-term.
- Member-states should be encouraged to invest in measures which bring long-term benefits rather than short-term relief, for example investing in insulation can help to reduce heating allowance payments.

→ **Public tenders concerning refurbishment should include energy services.**

- Demand for energy services in Germany and Austria was driven by the government employing them for the energy refurbishment of public buildings. This should be replicated in other countries where it is not already the case.
- It should also be examined where there are possibilities to increase demand for energy services, for example, by allowing public tenders to consider energy services as a possible alternative and by allowing government accounting to consider the potential savings in running costs as a factor for financing energy efficiency improvements.
- Particularly during large-scale refurbishments or urban renewal measures the legal framework facilitates the introduction of suitable energy services while leading to both significantly higher savings in energy consumption and significantly reduced costs due to the economies of scale that can be realised.
- The EU could act as a model while tendering refurbishments.

→ **Energy contracting should include energy refurbishments where possible.**

- Implementing energy refurbishments together with energy services increases the scope for energy savings. Where possible energy refurbishment measures should be linked to energy services.
- Using one contractor for both the energy refurbishment as well as the energy supply adds an effective incentive for the contractor to ensure that the work is of the highest quality possible: mistakes such as gaps in insulation increase the amount of energy needed to heat the building thereby diminishing his profit margin.
- When promoting refurbishments it is important to allow for “repeat savings”. Carrying out refurbishments in the right order is important to avoid “one-off” or “cherry-picking” behaviour.
- The role of the EU should be to ensure that grants are structured to allow maximum energy savings, for example, higher grants or improved conditions for clients who improve their energy performance by both refurbishing as well as using energy services.

Note:

This document is a synthesis of documents originally written within the framework of the EU sponsored project ECO-Build (www.ecobuild-project.org/) which developed recommendations for improving the energy efficiency of the building stock.

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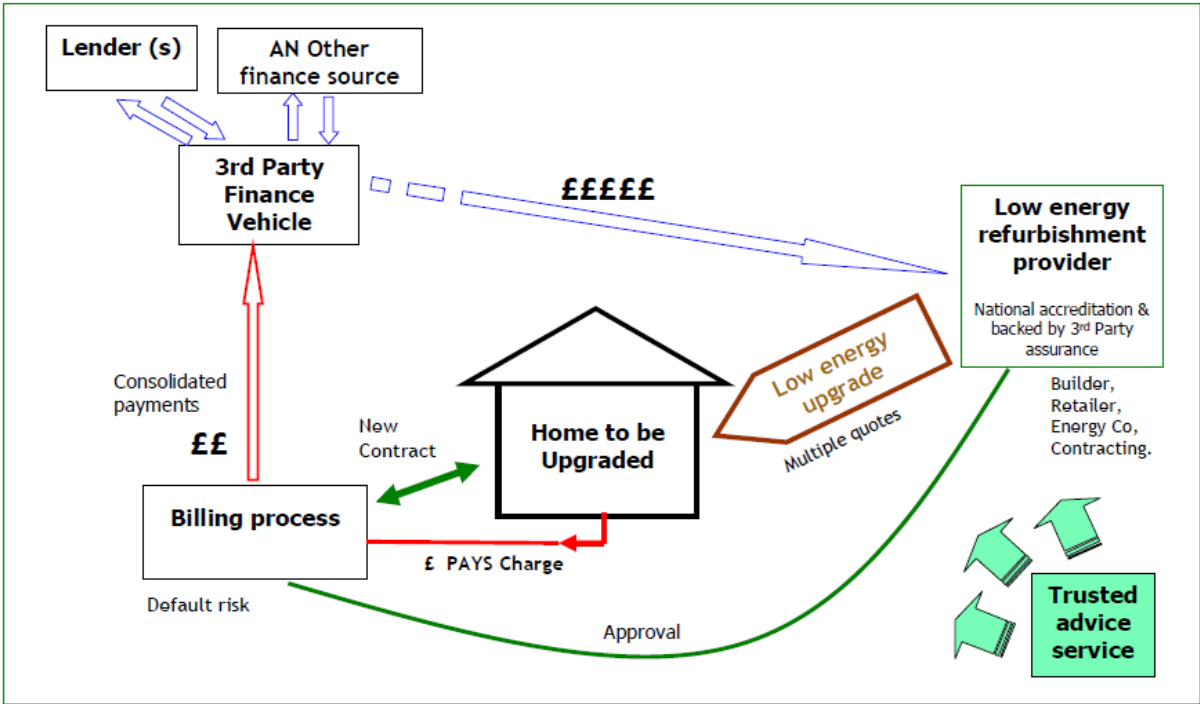
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Annex

A brief overview of the Pay As You Save model.

“A low energy refurbishment provider uses finance, from a third party, to cover the upfront costs of the low energy work. An obligation to repay is linked to the property over an extended period of time and the repayments are calculated to be less than the savings that will be made on the fuel bills. Crucially, at change of tenure the benefit of the measures and the obligation to pay is transferred to the new householder. The PAYS Charge is collected by the local authority. The upfront costs are moderately subsidised and/or carbon reductions purchased and incentives are provided to encourage mass take up. The work is undertaken by an accredited company with rigorous enforcement of standards and the mechanism as a whole is promoted by trusted 3rd parties.”



Taken from: Pay As You Save – Financing low energy refurbishment in housing – Executive Summary. UK Green Building Council. August 2009. pp. 2-3. www.ukgbc.org.