

Market Development for Energy Services in the European Union

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ABSTRACT

Energy Services and especially energy performance contracting are widely promoted as the means to overcome financial constraints against energy efficiency investments. In particular, for the public sector this model of Public-Private-Partnership (PPP) is considered to be one of the most effective tools to enhance the energy efficiency in the public building sector. In the member states to the EU, this model of PPP shall help to accelerate the upgrade of public buildings. Crucial points for the market uptake of this model is the creation of demand in the public sector incl. the political acceptance of private sector involvement in prior public duties, trust from the private sector in doing business with the regional and local level in the new member states, trust from the financial institutions in the model, the contracting partners and the applied risk mitigation measures.

The paper discusses the applicability of energy performance contracting in the European Union (EU) Member States under the given conditions of public procurement laws and budgetary rules; Capacity building needs and the role of energy agencies for market development; The political acceptance with regard to the conflict between public sector employment and outsourcing; The role of financial institutions in the development of the market and the barriers that have to be removed in the financial community; The interaction with regulatory instruments and other market based instruments like white certificates.

Introduction

Energy Services and especially energy performance contracting are widely promoted as the means to overcome financial constraints against energy efficiency investments. Particularly for the public sector this model of Public-Private-Partnership (PPP) is considered to be one of the most effective tools to enhance the energy efficiency in the public building sector. Applied since the early 1990s, the European market development today has not reached its estimated volume of 5-10 billion euros² [1], not even in markets that can be described as developed, such as Germany and Austria.

In the beginning and middle of the 90s, only a few EPC projects were initiated. No standard documents were available, and there was very little to no transparency regarding the detailed agreements. There was no real publicity about the projects either, although there were some properly designed concepts. A growing market of energy supply contracting as simpler case of energy services existed. Building owners, however, were hesitant to approach energy performance contracting. They did not know whether the offers were trustworthy, whether the contracts were legally reliable, and there were uncertainties on the real value of the contract.

¹ The Berliner Energieagentur (Berlin Energy Agency) is a private limited company. Founded as a public-private-partnership upon initiative of the Berlin Senate in 1992, the agency today has four shareholders, Berlin's electricity utility Vattenfall Europe Berlin, the gas utility GASAG, the State of Berlin, and the KfW Bank, a public bank. However, the agency is 100% project funded, without core funding sources. For more information refer to <http://www.berliner-e-agentur.de>

² 1 USD is equivalent to approx. 0.8 EUR

Today the contracting market in Germany has a total investment value in excess of 5 billion euros. The share of energy performance contracting is approximately 15%. 80% of that value is energy supply contracting [2]. The remaining 5% are contracts on other forms of contracting such as operation management contracting.

The developments in Berlin played a considerable part in spurring market development of energy performance contracting for the public sector in Germany. In 1995 energy performance contracting was introduced and implemented as *Energy Saving Partnership* (ESP) in Berlin. Its aim: reaching ambitious objectives for climate protection and reducing energy costs in the face of a very tight budgetary position. The assessment of the public building sector had resulted in a saving potential of 25 %. Today, Berlin has all in all over 1,300 buildings that are under contract in 19 building pools. The total net amount of first investments made by ESCos has reached over 40 million euros. Over 9.5 million euros are guaranteed in savings, an average of 25% per building pool. CO₂ emissions avoided are just below 60,000 tons annually. Following suit, the Austrian EPC market has seen a quick take-up in the last years starting from a level around zero in 1998, to nearly 600 buildings optimised through EPC in 2002. This is roughly 3% of all public and private service buildings, related to the useful floor area [3]. Obviously, the potential for energy efficiency is still vast, particularly for EPC in the service-building sector.

Looking at the European Union as a whole, the market for energy services is extremely diverse, posing a barrier for more uptakes. Based on the experiences of the authors with market development in Germany, and in other EU Member States, issues for market development are discussed in the following paragraphs.

The Applicability of Energy Performance Contracting in the EU Member States under the Given Conditions of Public Procurement Laws and Budgetary Rules

The applicability of energy performance contracting in the EU Member States (MS) is not merely a question of economic potential. Numerous studies have concluded that the total finally energy consumption in the EU is approximately 20% higher than economically feasible. The technical potential for energy savings is estimated at 40% and therefore even higher than the economic (cost-effective) savings potential [4].

Examples Market Potential

In **Germany**, EPC projects have been implemented for approximately 12 years. In total the German contracting market can be characterised as an already relatively big market showing an increase every year. In 2003, the volume in the hospital sector was 70 million euros. Sectors such as the hospital sector, but also industry sector, are expected to grow substantially with 100-150%. Other sectors, including difficult ones such as the real estate sector are expected to grow as well. Projects are expected to increase by 10-20% in the coming years [2].

In **Sweden**, a relatively modest calculated energy savings potential of 15 % of current energy consumption would correspond to 3.3 TWh reductions possible using the EPC approach, and an embedded EPC investment potential of approximately 650 million euros with a relatively short payback time [5]

There are three regulatory levels that influence the applicability of energy performance contracting in the European MS: The European Union (issuing directives, regulations), national governments (issuing laws, decrees, regulations), and in the case of states, as is the case in Germany, the regional/state level. Current EU and most national procurement legislation, even if it may not specifically mention EPC, do not pose an obstacle for energy performance contracting. EU procurement regulations as well as most national regulations allow enough flexibility to start tenders for EPC projects. Already in 1993, the European Directive to Limit Carbon Dioxide Emissions by Improving Energy Efficiency³ expected legal frameworks on the Member State level to allow third party financing models as a means to achieving climate policy targets.

Hold-ups in market development for EPC allude to procurement regulations and budgetary rules and their (differing) applications in the different MS of the European Union. A, in many cases, extensive and multiple-level decision-making process as well as the various cultures of handling investments in the different MS is an underestimated issue that has also a substantial influence on decisions taken for or against EPC. In the following paragraphs, the situation is explained in more detail by referring to individual countries showing quite a diversity of issues despite a few common points.

In **Germany** no fundamental legal hindrances for the realisation of energy services exist. The legal conditions (budgetary and municipal law) for TPF/EPC in the public sector could be better. Problems are related to a lack of clarity of opinion and mandate regarding the use of energy services, of third party financing models such as EPC. The lack of clarity is visible in a legal framework that in principle allows EPC. However, different German states (Länder) take different views on how to handle EPC in general and with view to budgetary handling. This results in different practices for approving contracts by the supervisory authorities, which are not always in favour of EPC. Those potential EPC customers who have not yet applied EPC are therefore left with considerable uncertainty as to whether or not their own plans to implement a project will be agreed to by the supervisory authorities.

Where ministries of finance or the supervisory authorities have published an opinion on EPC, as was the case in the State of Hesse or in Berlin, EPC could establish through this positive backup.

The administrative and budgetary regulations regarding public bodies' usage of EPC aren't very developed and therefore leave ample room for interpretation also in other countries. For **Sweden** this is basically a result of the, until recently, relatively modest implementation and interest in energy performance contracting. This is slowly changing, and, just as it is the case in Germany, interpretations differ with regard to legal interpretation. The main obstacle hindering a faster and more comprehensive development of the Swedish EPC market, however, is the limited know-how and experiences within the public and private real estate sector, causing EPC companies and others severe difficulties in convincing the customers and explaining the contractual benefits of EPC. These difficulties are only partially linked to legal issues such as public procurement and accounting rules; the main issue in Sweden is conservatism and lack of credible and highly visible reference cases, with a clear customer focus. The latter issue is extra important since some of the first "EPC-similar" projects carried out in the early *1980ies* caused problems and didn't deliver the anticipated value for the customers. [5]

³ Directive [93/76/EEC](#), Art. 4.1, (2). Official Journal L 237 of 22 Sept. 1993

In **Slovenia**, the Ministry of Finance has issued an opinion on Third Party Financing and EPC not long ago. Here, the public sector as direct user of state budget (e.g. municipalities) is obliged to respect provisions of the Law for use of the budget of the Republic of Slovenia. The law doesn't restrict the contract duration as such, but it defines the highest amount allowed as a burden on the state budget to be carried into future accounting years. In 2004 this was limited to the 60 % of the total budget for goods, services and current transfers for the next year. Since 2004 energy performance contracting contracts are among the exceptions because payments are covered from the savings achieved. This exception reflects the opinion of Ministry of finance that energy performance contracting projects don't fall into the same category as for example investments, for which credits were used. So even though TPF is not specifically included into the existing public procurement law itself, this is in principle not preventing the implementation of TPF projects.

The examples could be continued. While general terms are no obstacle to EPC, the level of flexibility and therefore room for (legal) interpretation results in uncertainties that still hinder project numbers to rise substantially.

On the EU level, some effort has been undertaken on the way for more clarity. The Directive on the Energy Efficiency of Buildings⁴ and the recent Directive on End-use Energy Efficiency and Energy Services⁵ both ask the public sector to lead by example regarding energy efficiency and purchasing energy services, and the use innovative tools such as performance contracting is recognized positively. This – in addition to recent decisions by the European Court of Justice and explanatory notes by the European Commission on the inclusion of environmental criteria in tendering documents – sets a clearer framework for innovation through competitive tendering in the public sector.

Capacity Building Needs and the Role of Energy Agencies for Market Development

It was said before, based on numerous studies [4] that the cost-effective energy savings potential in Europe is 20%. The market for energy services does not show the volume that could be expected based on the available potential. Why is the market not responding accordingly?

The availability of adequate information and experience and know-how is one issue. Energy Performance Contracting has a degree of complexity to it that asks for a well-balanced agreement between the customer and the ESCO in order to become a win-win project. It asks for both technical and economic know-how and understanding. Often, interested potential customers do not have enough experience to develop adequate tender documents and specifications in order to get a best offer, or they do not have the staff capacity to do so.

Energy agencies as they exist in Europe have a specific position that can fill this knowledge and information gap. Many energy agencies are set up by initiative of a local (or regional) government, a municipality, but are founded as a public private partnership. The form of a limited private company makes them independent (and without core funding), but they assemble shareholders from both the public and the private sector. Often these are, besides the municipal/regional government, utilities and/or banks. Such an agency has technical knowledge, and it understands what an ESCO can offer. It also has the economic know-how, and understands

⁴ Directive 2002/91/EC, Official Journal L1/65 of 4 January, 2003

⁵ Directive 2006/32/EC, Official Journal L114 of 27 April, 2006

the ESCO needs to make a living, since it is in a similar position where it has to secure projects, sell services on the market and survive economically. But it is also in a position and has the knowledge base to understand the needs of the customers.

Thus energy agencies are in an intermediary position. Hired by the EPC customer, they professionally manage the project process. They create an enabling environment for both sides by balancing out expectations. This creates a more level playing field, and for the first time from the side of the customer, which before was not available. With growing experiences the agencies use their specific position and know-how to optimise packages, and offer support with regard to simplification of the process and ease to identify qualified offers.

ESCOs and customers alike today appreciate this intermediary role of energy agencies. For this role to be appreciated, 'standardisation' is an important element. Standards carry the potential to increase trust on all sides because they increase the procedural transparency. In addition, experience shows that tested standards do help in reducing transaction costs not only on side of the customers, but also for the ESCOs.

The question remains why there aren't more energy agencies that establish EPC consultancy services as one of their areas of business. The answer refers back to the complexity of EPC as well as transaction costs for the extensive communication needed to reach customers. It is a general fact that even though advice is appreciated, selling it on the market is not. Especially where no reference cases can be provided, trust in a new market actor is difficult to achieve.

With regard to EPC market development, however, the *assumption* is that more locally available know-how for professional management of EPC projects is one essential basis for market development anywhere. Start-up help and support with transaction costs is needed. Based on existing experiences in Germany and Austria, and supported by European Commission and national government funding, 1999 saw the uptake of know-how transfer to other countries in Europe.

The *aim* was to transfer and apply the experiences gained thus far to other countries, by providing tested standards (thus an outlook on reduced transaction costs) to give an impulse to market development for energy services. The *approach* taken was to build local capacity, to provide a project development standard, as well as standard documents adapted to the local legal conditions and – to implement pilot projects as good reference cases.

During the first project in Slovenia (1999-2001) an EPC contract for the pilot project was signed in 2001. During 2003 and 2004, the "clearcontract" Clearinghouse for Energy Contracting was developed. Partners in Lithuania, Latvia, Poland, Czech Republic, Slovakia, Hungary and Bulgaria were trained, the standard and documents developed and pilot projects initiated. In the Czech Republic 10 contracts have been signed following the clearcontract approach, managed by the Czech project partner, "SEVEN", who has taken on quite successfully a role like the Berlin Energy Agency assumes in Berlin. All in all, the clearcontract project laid a good basis for further development of the market in Central and Eastern Europe, but hurdles still remain. For example, not in all countries participating good reference cases could be finished, i.e. contracts signed. The trust in the model of EPC is very much linked to reference cases. They are needed for further information work to be done in order to build trust and interest on the decision making level. This is even more important for long-term decisions taken in the public sector. Currently there is a still rather strong dependence on the election cycle and a need for short-term visibility of decisions within the election term, which needs to be reduced.

The small number of domestic companies that respond to the call for tenders and can provide the services needed is another issue. For more (especially for small) companies to enter the market, further development of financial instruments available via commercial banks is needed, as is an increased know-how on EPC in the banking sector.

Last but not least the establishing of market mediators is difficult without reference cases that give proof of the ability of the new market actor. Where close links to governmental institutions exist, and no economic need to establish new fields of business, the same applies. As mentioned before the ex-ante costs to establish this field of business demands more time and financial support than the two year co-funding that was available in the course of the project.

Since the beginning of 2005, based on previous experiences, the know-how is further shared and spread in cooperation with ten partners from Austria, France, Finland, Greece, Italy, Norway, Sweden and the United Kingdom in the framework of the project EUROCONTRACT – Guaranteed Energy Performance⁶. This is a three-year project and most partners are energy agencies or consultants that want to establish themselves as market mediators for the uptake of energy services in their countries.

The need for further information and dissemination activities is still very valid all over Europe. The more consistent that this happens, the better. Energy Agencies are in a position to fulfil this role, and are increasingly picking it up, where support such as is available through the European Commission, is available.

The Political Acceptance with Regard to the Conflict Between Public Sector Employment and Outsourcing

A frequently listed argument against energy performance contracting and other kinds of outsourcing services in the public sector is that of loss of work places. It contains more than the fear of staff to loosing their work place. It also includes the fear of loss of control, a fear of possible proof for supposed incapability of proper energy management. Other issues playing a role are a fear of legal problems in the frame of the tender process or, more recently, uncertainties regarding the future demographic development⁷. All of the above can lead to hampering conditions either from staff on the technical implementation level or on the side of the political level. However, fact is, that the backlog of building upgrade is huge, the available investment capital little. Seen against the targets and need for reduced energy consumption (security of supply, reduced dependence on energy imports), a reduction of energy costs (Tight public budget situation) and the need to reduce greenhouse gas emissions (climate change), the above-mentioned fears could be countered well. The public sector alone will just not be able to achieve these targets without additional help.

In recent months, energy efficiency moved up on the list of priorities of political rhetoric, it is extensively covered in the media, and also receives increased attention by citizens. Reasons are continuously rising energy prices and an increasingly visible vulnerability to energy shortage following natural disasters such as hurricanes, which are attributed to anthropogenic induced climate changes following excessive energy consumption.

⁶ <http://www.eurocontract.net>

⁷ In most European countries, the population ages and shrinks, numbers of pupils decrease. This questions the engagement e.g. of schools in EPC contracts, when it is not clear whether a school will have to be closed before the end of a contract.

However, the uptake of implementing energy efficiency and the acknowledgment of energy efficiency as an economic, and not just an environmental issue is still slow on the implementation level. Administrations have failed to develop clear unequivocal mandates on the issue to direct procurement of energy efficient energy services. Procuring offices need clear, independent information. For EPC, this is not available everywhere, and specifically not in a consistent manner as was explained before (chapter 2) Also, energy management units, where they exist, often only play a consultative role whereas the ultimate responsibility for system investment and energy costs remains with other departments such as the facilities and accounts department. Again, clear unequivocal mandates on the issue to direct procurement of energy efficient energy services are essential. This includes information on the essential role that existing energy staff plays, also for EPC projects. A fear of loss of control will not lead to immediate support by the respective units. In the face of tight budgets, new ideas are launched under the umbrella term of new public management. Efficiency targets for public services and newly outsourced activities are introduced. They are eyed suspiciously. In theory, energy staff could achieve all of this. With regard to EPC, the tasks fulfilled by energy staff are shifting towards more monitoring activities. They have an important role being the link between the customer side and the ESCO. This information needs to be explained properly. With view to the lack of investment capital for in-house action, EPC provides an opportunity for energy staff. During, and after the contract period, they will be able to work with proper, tested and modern equipment. Where investment capital is available, and the staff and know-how is available, there is no reason why an in-house project should not work⁸. The key element – the contractual guarantee for the level of savings, however, is lost. This, in combination with a lacking competition, the level of achieved savings will also be less, a factor that has to be taken into account (rough figure: 5%) when the comparing the in-house versus the out-sourced solution for building upgrade.

The differing or missing legal interpretations with regard to the tender and awarding procedures even within one country, as explained in chapter one with the German example, are a sign of political unwillingness to step up and provide a clear mandate in favour of energy services such as EPC, even through the legal conditions are positive, and where investment capital is lacking. It can be hoped that the Directive of End-use Energy Services⁹ will fulfil the expectations to force Member States to take on a clearer and more unequivocal position.

Also demographic changes in ageing societies effectively become an issue for EPC in the public sector, too. Schools closing and whole cities shrinking provide more uncertain outlooks on the use of buildings and therefore their possible inclusion in an EPC contract.

Among the private sector, a recent survey [7] showed that similar barriers as mentioned above apply. Often no dedicated energy staff exists. Therefore resources dedicated only to energy issues are scarce and may not be top priority where energy constitutes only a small portion in the overall cost structure. This is even more so the case in smaller enterprises, which in Europe account for more than 90% of the existing companies.

⁸ For example, the city of Stuttgart is applying the principles of EPC in-house (called Intracting)

⁹ Directive 2006/32/EC, Official Journal L114 of 27 April, 2006

The Role of Financial Institutions in the Development of the Market and the Barriers that Have to Be Removed in the Financial Community

In Europe, the uptake of EPC in the public sector is mainly founded on the fact that customers lacked the necessary investment capital (or access to that capital) for energy efficiency upgrades in the building stock. Among the requirements for ESCOs to win a tender was and in most cases still is therefore the ability to organise the financing for the project making the ESCO the debtor. This is in contrast to the US market where the debtor can but in many cases is not the ESCO.

With more projects taken off ground, financing of energy services has become increasingly burdensome for ESCOs as well as their customers: Market partners reach their credit line limits; credit liabilities burden balance sheets. In addition international accounting guidelines and Basel II regulations¹⁰ cast their shadows. Basel II has an impact especially on smaller ESCOs, because their credit wishes will more likely have worse conditions where an increased need for asset backed securities arises. The equipment installed cannot in all cases be used as collateral by the ESCO. The German Civil Code, for example, stipulates that equipment which is connected to a building passes into ownership of the building owner immediately when it is installed. With regard to the question of ownership, a new outlook is that currently finance options like operate or finance lease agreements are under consideration, and are already applied for some energy performance contracting projects in Austria. Their wider applicability still needs more reference cases and opinions from Ministries of Finance.

The commonly used instrument today for re-financing (hardware costs) by the ESCO is factoring (in Europe: forfeiting). Forfeiting is the in case of EPC long-term sale of (future) receivables: when a bank loans money through a forfeiting mechanism, the bank wires euros to the ESCO at the time of completion of the project set-up, i.e. when the equipment has been installed. The customer makes periodic fixed payments to the bank. For this, the customer signs an agreement on the amounts to be paid directly to the bank or financial institution. For the ESCO this may mean that the amount of security that it has to provide to the customer is increased. The normal practice could be for example to ask for 5% of the total savings guaranteed over the contract period to be backed by a bank guarantee. If forfeiting is applied, this amount increases to 10% as an additional security for the customer. Since forfeiting is an instrument to re-finance the ESCOs hardware costs fast, it is today commonly used.

From a debtor's perspective, it is desirable to base any debt service on the project cash flow as opposed to basing it on the customer's creditworthiness alone. Debt should be repayable from future project income, the energy cost savings in the case of EPC. The savings generated are however, not always acknowledged as cash flow and therefore collateral.

This is an issue that needs further to be worked on with regard to commercial banks. Commercial banks are interested in the business that can be generated in the field of energy services but there is still caution and barriers.

¹⁰ Basel II is a set of regulations aiming at an increased stability of international financial markets. Its central topic is the share of equity capital in banks' activities. Basel II results in credits being given out with an increased sensitivity to risks associated with a specific credit.

- *Project Size:* for many banks projects below an investment volume of three million Euros is too small to provide good conditions; support through global loans from development banks, state owned banks, to cover part of the risk could be one solution
- *Financial strength of the ESCO:* a small ESCO with less collateral acceptable to a bank will have larger overall capital costs, thus overall project costs will increase. If the value of the guaranteed savings were included and ranked higher in the due diligence this would improve the outlook on conditions for smaller companies. *The cash flow generated in an EPC project* is an asset. The value of this asset currently is not valued as such by banks,
- *Creditworthiness of the building owner:* In this respect there are no problems with public owners in Western Europe because of their commonly high and in many cases even AAA-rating. For Central and Eastern Europe, payment morale provides a risk that not all ESCOs are willing to take. Here also, banks and especially development banks could find a role for mitigating risks through partial guarantees to support local banks, such as are offered by the International Finance Corporation's (IFC) programme "Commercializing Energy Efficiency Finance"¹¹.
- *Project risks and risk mitigation instruments:* For all the above-mentioned issues, the project design, its feasibility and applied risk mitigation strategies are essential. Banks need to understand the value of the guarantee given, need more information on how EPC works

Among the suggestions for a future role of the financial sector is that loans need to be more specifically available for e.g. energy efficiency projects also by commercial banks. One focus needs to be also on smaller projects and their financing conditions. The set-up of energy funds for support of transaction costs or as a security backup could also be considered.

Less debt on the balance sheet of the ESCOs has the effect to keep ESCOs manoeuvrable on the market, also allow them to expand their activities in the field. Some ESCOs envisage the use of special purpose vehicle to sell of the future income from their projects to a fund type of structure and thus re-finance. However, no such (commercial) fund is yet known to exist.

Authors believe that standardisation of project development procedures and standard documents such as model contracts help. Where standard documents are used, transparency is increased for both sides. With regard to the financial side, such standards in project development process are a quality-ensuring instrument whereas a standard contract model used is a risk mitigation instrument.

The Interaction with Regulatory Instruments (e.g. EU Directives) and other Market Based Instruments like White Certificates

In the European Union a number of directives are directly relevant for the application of energy performance contracting. They can be principally divided into the two categories of either regulating by law providing an exact limit and scope, or to set a framework within which market forces are the regulating force.

¹¹ www.ifc.org/ceef

The **Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts** governs the procurement side. As has been stated, it does in principle not pose an obstacle to EPC applications. The directive offers, compared to its predecessors, a new procedure, the “competitive dialogue” for the tender process. It acknowledges that some services such as those in EPC projects cannot be clearly defined in advance. Allowing negotiating these services takes some uncertainties as mentioned in the beginning of this paper away, and has the potential to stimulate more projects to be taken on.

The Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the **energy performance of buildings**: The directive has the aim to create a common framework to promote the improvement of the energy performance of buildings. The Directive forms part of the framework of Community initiatives on climate change and security of supply. This Directive is a follow-up to the measures on boilers¹², construction products¹³ and other provisions on buildings¹⁴. The scope of the Directive concerns the residential sector and the tertiary sector (offices, public buildings, etc.). Provisions on certification does not, however, include some buildings, such as historic buildings, industrial sites, etc.¹⁵ The directive aims for

- a common methodology for calculating the integrated energy performance of buildings;
- minimum standards on the energy performance of new buildings and existing buildings that are subject to major renovation;
- systems for the energy certification of new and existing buildings and, for public buildings, prominent display of this certification and other relevant information. Certificates must be less than five years old;
- regular inspection of boilers and central air-conditioning systems in buildings and in addition an assessment of heating installations in which the boilers are more than 15 years old.

The common calculation methodology should include all the aspects which determine energy efficiency and not just the quality of the building's insulation. The Member States are responsible for setting the minimum standards.

The necessity to generate building certificates (building passes) can be supportive to EPC. The data needed for a demand-based certificate of a building can be the starting point to develop the baseline for an EPC project. Vice versa, the availability of data through EPC projects especially in the public sector can support the Directive's implementation and avoid costs of generating the pass for the public sector. The discussions whether the consumption or demand of a building will be the basis for the building certificate is left to be decided in the MS and are not yet decided there.

Directive on end-use energy efficiency and energy service (2006/32/EC) is about to enter into force. The directive's aim is “not only to continue to promote the supply side of energy services, but also to create stronger incentives for the demand side. The public sector in each Member State should therefore set a good example regarding investments, maintenance and other expenditure for energy-using equipment, energy services and other energy efficiency measures”¹⁶. The directive, however, only proposes an indicative target of 9 percent reduction

¹² Directive 92/42/EEC

¹³ Directive 89/106/EEC

¹⁴ The SAVE supporting programme, (-2002), from 2003, the Intelligent Energy Europe programme

¹⁵ <http://europa.eu.int/scadplus/leg/en/lvb/l27042.htm>

¹⁶ (COM(2003) 739), provisional version of the final text of the directive, 6a, page 3.

between 2008 and 2017. It is a further indication that despite rising energy prices and increased political rhetoric on the need for more energy efficiency, the political will is not strong enough to give a clear mandate to the implementation level.

Nonetheless, the directive is expected to bring some impulse to market for energy services. MS are asked to reduce barriers to the application of EPC, as well as the provision of model contracts. Model contracts, are for example, currently under preparation in the EUROCONTRACT project.

Further Interaction with Market Based Mechanisms

In the long run, the transition towards more sustainable energy systems may be more effective if supplemented by policies aiming at short term cost reduction, and by market driven policies for climate change mitigation. This is the rationale also behind such instruments such as green and white certificates. They were proposed to harness renewable energy sources (green certificates) and to use more efficient end use devices (white certificates) that are competitive or nearly so.

White certificates are a means to force suppliers that don't have any special interest yet to think about energy efficiency. While the white certificates and EPC have quite different goals they are linked. EPC is an opportunity for consumers that would like to lower their costs, but they don't have money and opportunity to invest. White certificates are a must for suppliers. But EPC could be their mechanism to fulfil their obligations, making them also more acceptable because of the profitability of such projects. In this way, they can become supporters for EPC, and look for customers willing to earn some money with the certificates but also willing to give some savings to the ESCO. Issues that are yet unresolved are: is the customer willing to leave the certificates with the supplier? And - the costs or price achievable by selling the certificates is uncertain, and most likely volatile. This is a high risk factor for the project developer

Conclusion

The experiences made in Berlin and with the transfer and application of this know-how in a number of European member states show that a market for energy performance contracting in the public sector can establish under different conditions.

- A clear political mandate to apply the instrument as one element to increasing energy efficiency, and reduce resource dependency
- Adequate information
- Standard documents offering procedural transparency, a means to create trust on both sides when well balanced
- In the start up, transaction cost support for ESCOs, and customers
- Independent experts for the management of project development and tender procedure
- Increased understanding of the concept among the financial sector and financial instruments available also through commercial banks for EPC
- Companies, including domestic ones, that are able to offer the services needed are available

These factors are the basis, but additionally, the financial sector needs to be addressed with targeted information, and invited to a dialogue on finding ways to make access to capital for EPC less burdensome. Altogether these conditions will in the mid and long run decrease transaction costs, and increase the applicability for energy performance contracting.

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