



**CHANGE BEST**

*Energy Efficiency Services*

*Market development*

*Energy and energy service companies*

# Glossary

**Change Best: Promoting the development of an energy efficiency service (EES) market – Good practice examples of changes in energy service business, strategies, and supportive policies and measures in the course of the implementation of Directive 2006/32/EC on Energy End-Use Efficiency and Energy Services.**

**A project supported by the Intelligent Energy Europe Programme of the European Commission (IEE/08/434/SI2.528383).**

A main objective of the Directive 2006/32/EC on energy end-use efficiency and energy services (ESD) is to stimulate the market for energy services and for the delivery of other energy efficiency improvement measures to final consumers. In order to achieve this objective, the ESD gives a special role to energy distributors, distribution system operators and retail energy sales companies. On the other hand, there are different types of "pure" energy service companies (ESCOs) in the market ready to expand their business in the field of energy efficiency services (EES).

Against this background, it is important to know, how and to which extent the EES market could be further developed, what are appropriate business strategies and promising services not only for "advanced" companies but also for "beginners", what is a policy framework suitable to stimulate market development and to overcome existing barriers, and which role energy companies developing towards sustainable ESCOs could play.

The main objectives of ChangeBest are:

- to assist energy companies and ESCOs in entering the B2B and B2C market for EES,
- to contribute to the development of the EES market as part of the implementation of the ESD,
- to demonstrate good practice in implementing the ESD.

In order to achieve the objectives specified, the project work will consist of:

- empirical analysis of the EES market and the respective economic and policy framework in the course of the implementation of the ESD,
- exchange of experiences, national workshops and a European conference,
- a large bundle of promising EES business cases and strategies implemented in "field tests",
- communication and dissemination activities, and
- induced further action and networking by energy (service) companies.

## Date

30 March 2010

| Project Partner   | Country         |
|---|-----------------|
| Wuppertal Institute for Climate, Environment, Energy    | Germany         |
| e7 Energie Markt Analyse GmbH                           | Austria         |
| SEVEn   | Czech Republic  |
| ESB - Energy Saving Bureau                              | Estonia         |
| ARMINES   | France          |
| EDF – Electricity of France                             | France          |
| ASEW -  | Germany         |
| ULUND - Lund University                                 | Sweden          |
| HELESCO S.A.  | Greece          |
| eERG - Politecnico di Milano - Energy Department        | Italy           |
| Ekodoma   | Latvia          |
| ISR – University of Coimbra                             | Portugal        |
| ECN - Energy research Centre of the Netherlands         | The Netherlands |
| BSREC - Black Sea Regional Energy Centre                | Bulgaria        |
| Energy Piano  | Denmark         |
| REACM - Regional Energy Agency of Central Macedonia     | Greece          |
| KISE - Krakow Institute for Sustainable Energy          | Poland          |
| CESYS - Center for Energy Systems                       | Slovakia        |
| IJS - Jozef Stefan Institute – Energy Efficiency Centre | Slovenia        |
| ESCAN, S.A.   | Spain           |

## Project coordinator:

Wolfgang Irrek

Wuppertal Institute for Climate, Environment, and Energy  
Döppersberg 19  
42103 Wuppertal, Germany  
E-mail: wolfgang.irrek@wupperinst.org

## Glossary

|                           |   |
|---------------------------|---|
| <b>B2B</b>                | <b>B</b> usiness to <b>B</b> usiness means a contract between two companies<br>Examples: housing companies, municipality (public buildings), crafts enterprises, Retail industry, property developer rising up a settlement   |
| <b>B2C</b>                | <b>B</b> usiness to <b>C</b> ustomer means a contract between a company (e.g. EES provider) and a private person<br>Examples: tenants, private single house owners, private owners of small multifamily houses, buyers of prefabricated single houses   |
| <b>Energy</b>             | All forms of commercially available energy, including electricity, natural gas (including liquefied natural gas), liquefied petroleum gas, any fuel for heating and cooling (including district heating and cooling), coal and lignite, peat, transport fuels (excluding aviation and maritime bunker fuels) and biomass as defined in Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market.                 |
| <b>Energy audit</b>       | A systematic procedure to obtain adequate knowledge of the existing energy consumption profile of a building or group of buildings, of an industrial operation and/or installation or of a private or public service, identify and quantify cost-effective energy savings opportunities, and report the findings (2006/32/EC).<br>Systematic inspection and analysis of energy use and energy consumption of a system or organisation with the objective of identifying energy flows and the potential for energy efficiency improvement [prEN15900:2009] |
| <b>Energy consumption</b> | Amount of energy used.  |
| <b>Energy efficiency</b>  | Ratio between an output of performance, service, goods or energy, and an input of energy [2006/32/EC and prEN 15900:2009]   |

**Energy efficiency improvement (EEI)** Increase in energy efficiency as a result of technological, behavioural and/or economic changes [prEN 15900:2009].

EEI relevant for the ChangeBest project are only those that are increases in energy end-use efficiency [i.e. applying the definition of EEI in 2006/32/EC]

**EEI action**

Energy efficiency improvement action: an action in practice that leads to an increase in energy end-use efficiency as a result of technological, behavioural and/or economic changes [2006/32/EC]. EEI actions shall include one or more of the following [prEN 15900]:

- measures in order to reduce the energy consumption, e.g., installing building insulation, reduction of leakage in compressed air;
- replacement, modification or addition of equipment, e.g., high efficiency boilers, variable speed motors;
- more efficient operation, e.g., building automation, logistic and layout optimisation, control parameter adjustment;
- continuous optimisation of operation of technical installations, e.g., maintaining the installed equipment to its best performance;
- improved maintenance, e.g., maintenance planning, instruction of the operation and maintenance staff;
- deployment of behavioural change programmes, e.g., training, energy awareness campaigns;
- implementation of an energy management system, e.g., system compliant with EN 16001.

**Energy efficiency service (EES)**

Agreed task or tasks designed to lead to an energy efficiency improvement and other agreed performance criteria [prEN 15900:900]. The agreement can relate to the task and/or to the improvement. Other agreed performance criteria can be comfort level, production throughput, safety, etc.

The EES shall be based on collected data related to energy consumption. It shall include energy audit as well as identification, selection and implementation of actions and verification. A documented description of the proposed or agreed framework for the actions and the follow-up procedure shall be provided. The improvement of energy efficiency shall be measured and verified over a contractually defined period of time through contractually agreed methods [prEN 15900:2009; cf. also Annex A of this norm]

**Partial services connected to EES**

Services that just include parts (“components”) of the EES chain like energy audits, but are designed to directly or indirectly lead to an EEI.

**EESC**

Energy Efficiency Service Company. An entity that delivers EES.

Synonymously to ESCO, but with a wording that makes clear that the company focuses on EEI actions for their customers.

[expression used by [www.efiees.org](http://www.efiees.org)]

**EES contract types:**

- a) supply contracting (focused on the supply of a set of energy services mainly via outsourcing the energy supply),
- b) energy performance contracting (where the EES providers use the stream of income from the cost savings to repay the costs of the project, including the costs of the investment)
- c) other contracting types (e.g. leasing, Build-Own-Operate-Transfer (BOOT) contracts, chauffage, etc.).

**EES provider**

Any entity that delivers EES. Can be synonymously used to “ESCO” or “EESC”.

**EES provider or provider of partial services connected to EES**

Any entity that delivers EES or partial services connected to EES.

Provider types:

|   |
|---|
| Energy service company (ESCO)           |
| Equipment manufacturer or supplier      |
| Energy supply company                   |
| Energy distribution company             |
| Trading company (wholesale)             |
| Multiutility company                    |
| Energy consulting company               |
| Facility or property management company |
| Equipment installer                     |
| Independent specialist company          |
| Energy Agency                           |
| Bank                                    |
| ESCO of a finance institution           |
| Mix of some of the above                |
| Other                                   |

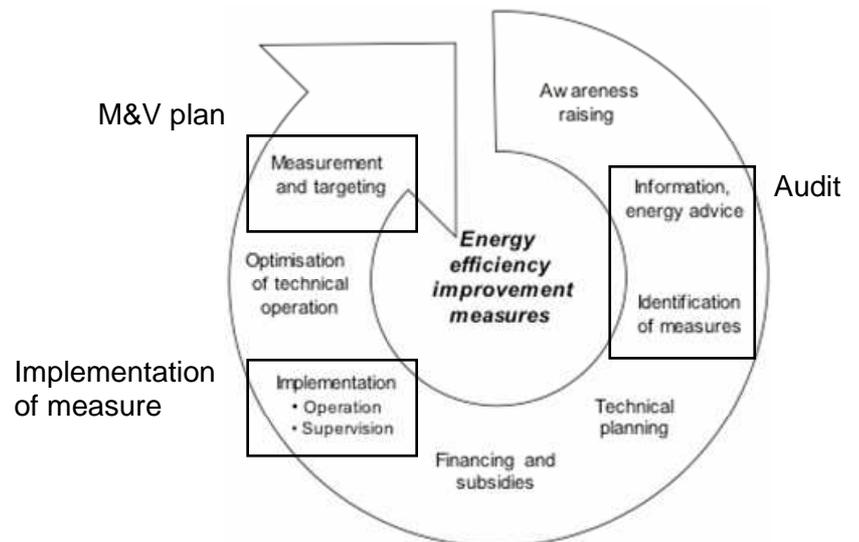
In case of ESCOs it might be of use to specify whether the ESCO is a public ESCOs, private ESCOs, public-private joint ventures, multinational companies e.g. having or not heating and building control equipment retailer origin, independent specialist companies.

**EES provider financing**

Refers to financing with internal funds of the EES provider (i.e. the EES provider is the borrower) and may involve use of its own capital or funding through other debt or lease instruments

## EES value chain stages

- 1) awareness raising,
- 2) information and energy advice,
- 3) identification of measures,
- 4) technical planning,
- 5) financing and subsidies,
- 6) implementation (operation, supervision),
- 7) optimisation of technical operation,
- 8) saving measurement and verification.



## Energy service

The physical benefit, utility or good derived from a combination of energy with energy efficient technology and/or with action (...) which is delivered on the basis of a contract and in normal circumstances has proven to lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings (2006/32/EC)

## ESCO

Any entity that delivers EES and in doing so takes some kind of financial risk and meets some defined energy efficiency performance criteria. (similar to 2006/32/EC).

In practice, "ESCO" is often used synonymously to providers of energy performance contracting.

Cf. also the definition of EESC and definition of EES provider.

**Energy company**

Company that deals with energy carriers. It should be differentiated between energy distributors, distribution system operators and retail energy sales companies as defined in the ESD. Among these, maybe further differentiating between electricity, natural gas, or heat companies or companies that deliver or distribute more than one of these energy carriers (combined).

**EPC**

Energy performance contracting: An EES which is paid for through energy savings valuation.  
Directive 2006/32/EC: A contractual arrangement between the beneficiary and the provider (...) of an energy improvement measure, where investments in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement.

**Energy user/customer financing:**

Usually involves financing with internal funds of the energy user/customer backed or not by an energy saving guarantee provided by the EES provider (for instance an university can use its endowment fund to finance an energy project in which the energy savings are guaranteed by an EES provider). Energy-user/customer financing may also be associated with borrowing in the case when the energy-user/customer as a direct borrower has to provide a guarantee (collateral) to finance the institution.

**Financing types**

The ChangeBest project distinguish between different financing types, e.g.: EES provider financing, energy user/customer financing and third-party financing.

## Policy instruments

Categorisation:

- 1) Regulation
  - a) environmental permits (e.g. WBM)
  - b) standards (buildings and appliances)
- 2) Financial incentives
  - a) subsidies and fiscal facilities
  - b) taxes and special tariffs
- 3) Agreements
- 4) Market based instruments (WCS)
- 5) Communication/procurement/labels
- 6) Other

## Sectors

Sectors where EES may be provided:

| <b>Sectors</b>              |   |
|-----------------------------|---|
| <b>Institutional Sector</b> | Primary and secondary schools                                 |
|                             | Universities  |
|                             | Local administrations<br>(municipalities, provinces, regions) |
|                             | Health/Hospitals  |
|                             | Public housing  |
| <b>Private sector</b>       | Hotels/hospitality  |
|                             | Office, commercial  |
|                             | Retail  |
|                             | Industry large  |
|                             | SME   |
|                             | Residential   |
|                             | Other   |

## Third-party financing (TPF)

Refers solely to debt financing. As its name suggests, project financing comes from a third party, e.g. a finance institution and not from internal funds of EES provider or of the customer. The finance institution may either assume the rights to the energy savings or may take a security interest in the project equipment. There are two conceptually different TPF arrangements; the key difference between them is which party borrows the money: the EES provider or the Text