EnPCfintrans
capacity building on energy performance contracting

NATIONAL CONFERENCE ON ENERGY PERFORMANCE CONTRACTING (EPC)

The Energy Performance Contracting Experience in Romania

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Ljubljana, Slovenia – October 12, 2016

german cooperation
DEUTSCHE ZUSAMMENARBEIT

This project receives funding from the

German Federal Ministry for Economic Cooperation and Development

This project receives funding from the Horizon 2020 European Union Research and Innovation Programme under **Grant Agreement No 649639**

Legislation at European level

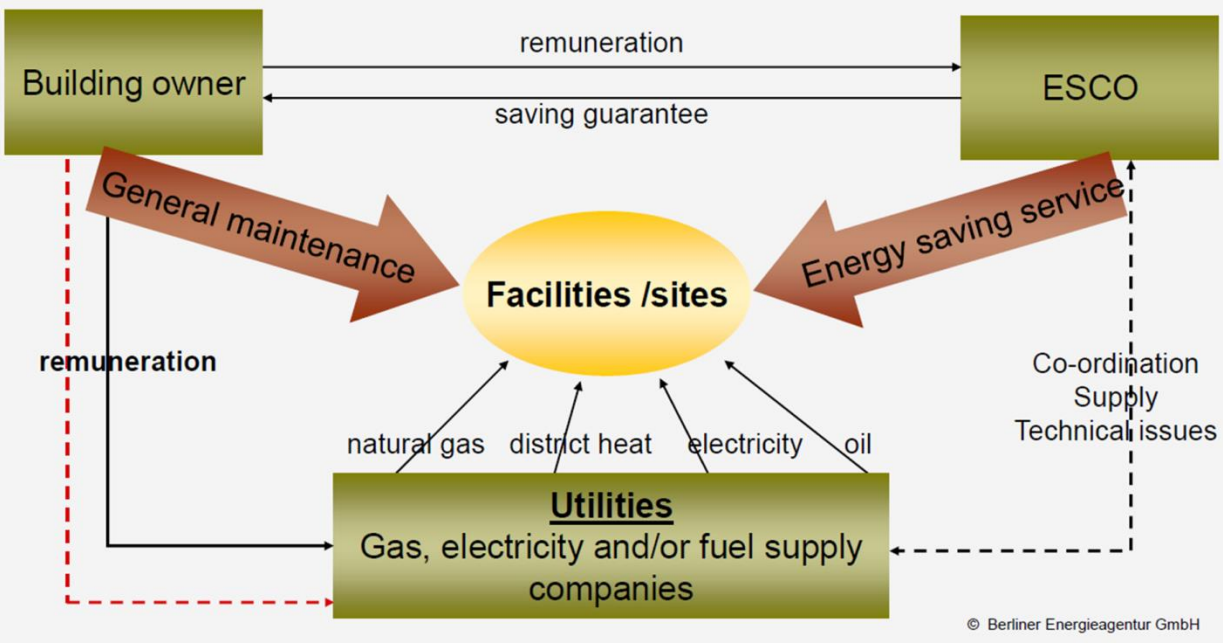
- The 2012/27/EU Directive - Energy Efficiency Directive (EED) establishes a framework to promote energy efficiency (EE) in European Union to ensure the fulfillment of the objective of 20% increased energy efficiency by 2020.
- Member States should promote the energy services market and access of SMEs to this market by:
  - Disseminating clear and easily accessible information regarding financial instruments, incentives, grants and loans to support EE projects
  - Publicly available and regularly updated list of available energy services companies
  - Support the public sector in terms of request for proposals for energy services (especially for rehabilitation of buildings)

Legislation at national level

- Law no. 121/2014 amended by Law no. 160/2016 transposes the EED requirements
  - Establishes national energy savings targets to be achieved during 2014-2020
  - Mentions the role of buildings belonging to public authorities which are required to renovate annually 3% of the total floor area of buildings over 500 sqm within the annual budget
  - Defines public procurement requirements stating that the public authorities purchase only products, services, works or buildings with high energy efficiency, to the extent that this purchase meets the requirements of cost effectiveness, economic feasibility, enhanced viability, technical compliance, as well as a sufficient level of competition
- National Energy Efficiency Action Plan (NEEAP) GD no. 122/2015 sets the objective of national energy efficiency: realizing an economy of 10 million toe of primary energy by 2020

EPC in a Nutshell

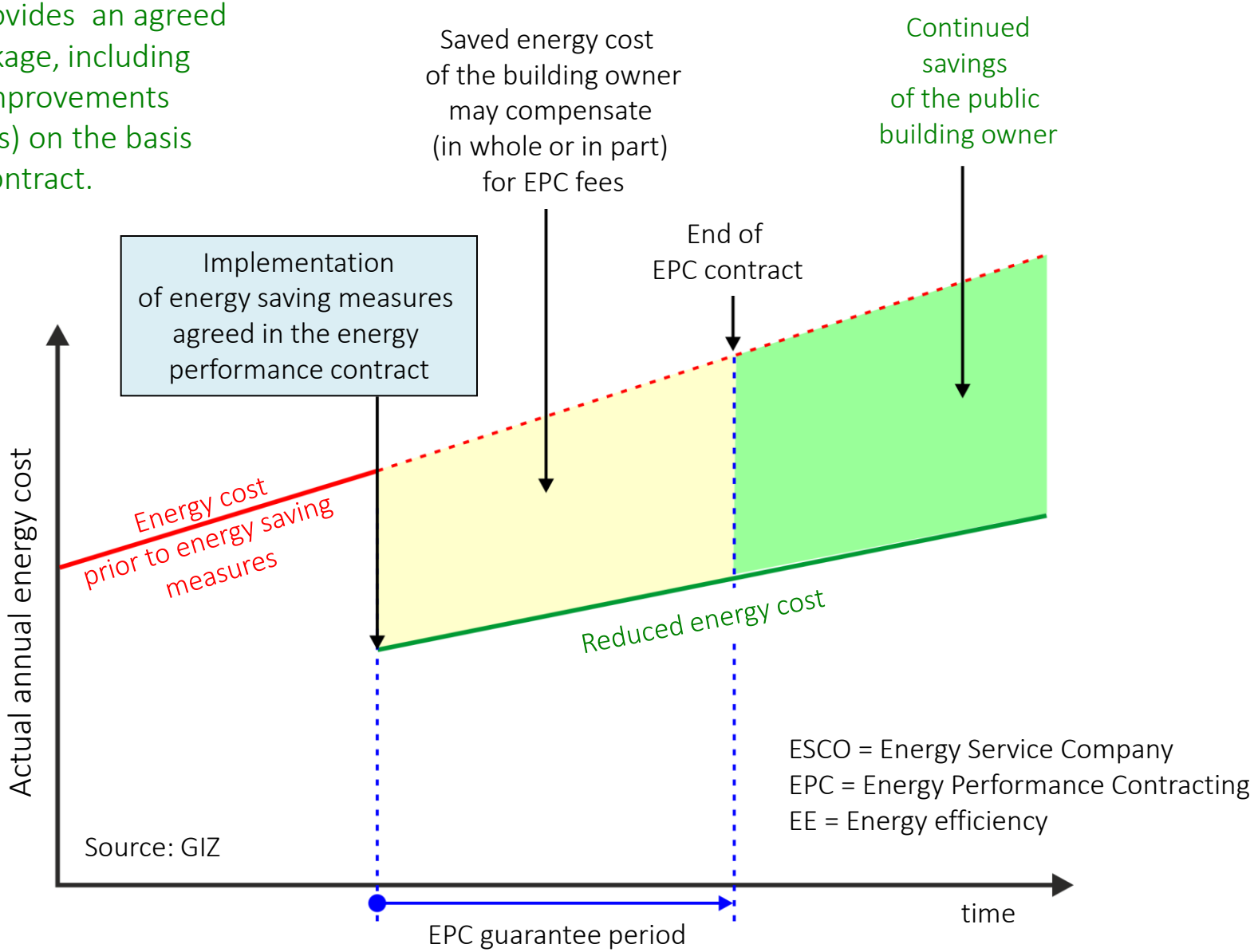
- The basic principle of Energy Performance Contracting is that energy efficiency investments are paid for [*in whole or in part*] over time by the value of energy savings achieved.
- Key elements of any energy performance contract are.
  - An external organization (ESCO) implements energy saving measures to improve energy efficiency of a facility and utilizes the stream of income from cost savings to pay for the investment.
  - The contract is structured so that the compensation is contingent on demonstrated performance, i.e. the ESCO takes a risk.
  - There is an agreed method for measuring and verifying energy savings.



(sources: SEAI 2014 / KSSENA)

The concept of EPC for public buildings

An ESCO provides an agreed service-package, including technical improvements (investments) on the basis of an EPC contract.

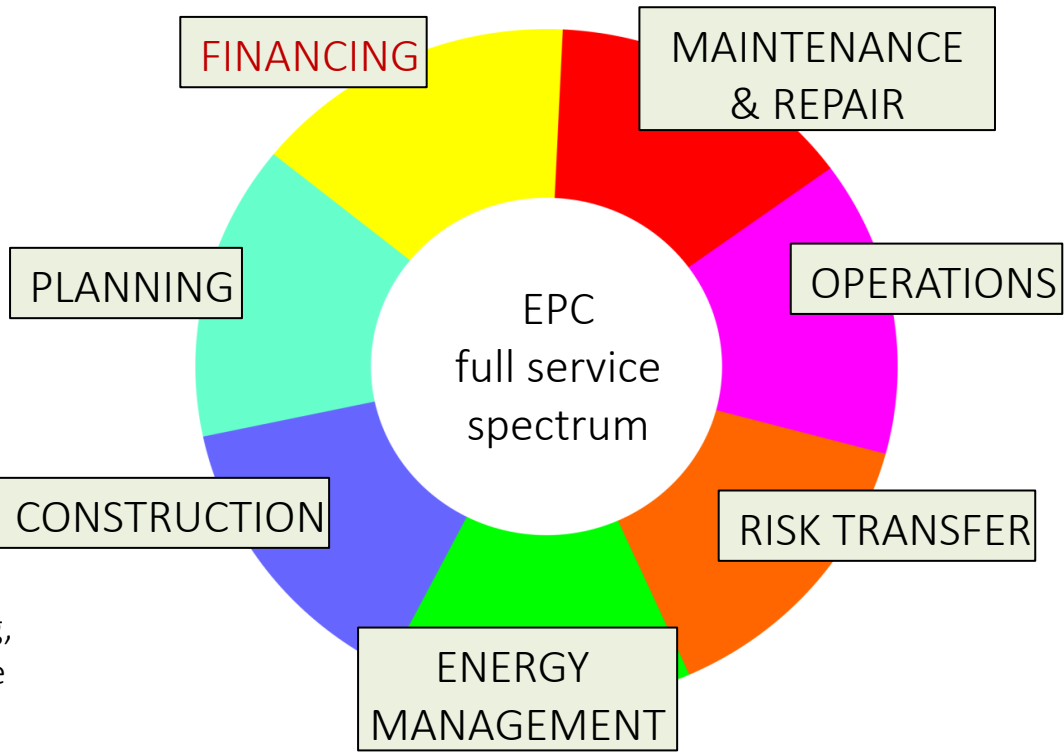


Advantages of EPC for the public building owner

Major advantages of EPC compared to traditional owner-directed ways of project implementation are:

- The building owner does not use own funds and transfers its investment risk to the ESCO.
- EPC improves energy efficiency and thus also increases operating reliability and security of supply, while energy costs and environmental pollution are reduced.
- The ESCO's technical know-how and professional energy management are used.
- The building owner is relieved of essential planning and operating work. More time remains for its own core tasks.
- Value, productivity and comfort of buildings are enhanced.
- The full set of services like e.g. planning, financing, construction, operation, and maintenance may be covered from one source, thus reducing the number of interfaces and transaction cost.
- Additional services such as user motivation and trainings can be included in the scope of EPC.
- Contract elements assign commercial and technical risks to the ESCO´s to a large extent.

(source of arguments : Transparense 2011)



Success factors for EPC (checklist)

- Political will at national level
  - ☐ No legal barriers prevent public authorities from using EPC services.
  - ☐ Transparent permitting procedures and clear permitting criteria apply for EPC projects in public buildings.
- Political will at local level
  - ☐ Commitment to the European Covenant of Mayors
  - ☐ Local Energy Action Plan (LEAP), Sustainable Energy Action Plan (SEAP), or European Energy Award (EEA) in place.
  - ☐ Energy efficient refurbishment of public buildings is a priority in the agreed LEAP/SEAP/EEA.
  - ☐ Energy audits and/or Energy Performance Certificates are established for local public buildings.
  - ☐ Municipal energy accounting, or energy management system are established and functional.
  - ☐ The concept of EPC is accepted in general, including private sector involvement and long-term contract relations.
- Suitable project
  - ☐ Energy audits or energy performance certificates indicate a high potential of energy savings.
  - ☐ Energy audits propose economically viable energy saving measures (maybe different scenarios).
  - ☐ Number of buildings to be included in an initial project is relatively small (<10).
  - ☐ EPC facilitators and service providers are available and interested in EPC projects in public buildings on site.
- Available know-how
  - ☐ Own staff or contracted local facilitators are able and willing to prepare and develop EPC projects.
  - ☐ Comparable reference projects are known either in the own country/region, or abroad
  - ☐ Approved templates for tender documents and contracts are available and applicable
- Available resources
  - ☐ Sufficient financial means are available to pay for facilitators' support during project preparation, tendering and contracting.
  - ☐ Sufficient qualified staff (own staff or contracted experts) is available for the management, controlling and monitoring of EPC preparation, development, tendering, contracting, and implementation.

If any of these success factors are missing, it is recommended to
first develop those factors prior to entering into the development of EPC projects.

Challenges

- High potential of energy efficiency for public buildings
- Obligations of public authorities established by current legislation
- High utility bills paid from local budgets
- Lack of capacity to manage consumption
- Lack of information
- Lack of motivation (energy is not the main activity)
- High investment costs
- Local authorities do not have sufficient funds for implementation of energy efficiency measures

Barriers

- The legislative framework including the regulations on public procurement and tendering process: changes in legislation, lack of an official definition and / or generally accepted notion of 'ESCO' and / or the existence of certification schemes or standards, contradictory interpretation of the legislation (weight acceptance of the concept of 'ESCO' by public authority, barriers on the procurement procedure)
- Low and fluctuating price of energy decreases the monetary value of savings even if the energy savings are great
- Economic and financial crisis created difficulties in accessing funding
- Business and technical risks perceived to be high
- The distrust generated by the lack of standardization: heterogeneous offers by ESCO, lack of competition, lack of credible and visible examples, definitions unclear and failed contracts, procedures for measurement and verification not standardized, complex and non-standard contracts
- Market and partnerships issues: lack of trust from customers, lack of well-established partnerships between ESCO and subcontractors, lack of entities ("facilitators") to facilitate ESCO market penetration of energy services.

The Romanian Experience

- During 2013-2016 national project The Starting Up of a private Market of ESCO services in Romania
- 6 participating towns + a sector of Bucharest
- potential savings: 15.000-19.000 MWh / year
- 2 public tender launched: Craiova and Galati
- objectives: schools and hospitals
- potential energy savings: 35% -55%
- required investment: 2 million EUR (schools) and 1,5 million EUR (hospitals)
- co-financing from local authorities: 48% -56%
- contract duration 10 years
- type of contract: ESCO with energy performance guarantees
- develop a standardized model for EPC
- round discussions with decision makers on legislation (ANRE, MFP, MDRAP)

Results

- Reference (baselines) unclear / uncertain, not including existing O & M
- Improper budget
- The lack of control by the contractor in achieving guaranteed savings
- Contract too rigid
- Measures of energy efficiency with long payback period
- Lack of a feasibility study and of an audit
- Warranty for all measures during contract
- Measures imposed, but unnecessary
- Lack or insufficient input data
- All responsibility supported by the contractor

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Thanks A Lot For Your Attention!

And good luck in your efforts to
implement energy performance contracting
in public buildings!

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