STEPPING

Supporting The EPC Public Procurement IN Going-beyond

Module 1 - Introduction to EPC schemes

The legislative framework at EU level and the importance of EPC contracts

The legal framework applicable to the Energy Performance Contract (EPC) is derived from both European Union (EU) and national legislations. At the EU level, the core definition of the EPC is to be found in the **Directive 2006/32/EC**, but it has not yet been fully transposed into the legislation of all European countries. Furthermore, most existing definitions are not "operational".

The **2012/27/EU Directive** - Energy Efficiency Directive (EED) establishes a framework to promote energy efficiency (EE) in European Union.

The legislative framework at EU level and the importance of EPC contracts

Within this Directive, the definition of Energy Performance Contracting is the following: "*energy performance contracting' means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings*."

- **Guarantee of savings** is one of the key elements of the EPC, they are listed among the minimum items to be included in energy performance contracts with the public sector or in the associated tender specifications.

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.

(Source: SEAI 2014 / KSSENA)

Why and when an EPC?

When evaluating the suitability of a project, or group of energy saving opportunities, for EPC there are **5 key considerations.**

1. Is the project **viable** (are savings generally sufficient to recover the original capital cost and investment return over a number of years (3 to 20 years))?
2. Where the **needed capital** comes from (ESCO, Municipalities, a number of sources)?
3. Who will take the **risk** (of investment, but not only) over?
4. How **savings** are allocated?
5. Is the **energy baseline** truly correct?

EPC benefits

- reduction of operating costs;
- facility improvement;
- outsourcing of non-core activities to focus on mission;
- simplicity of having a single source provider;
- dissatisfaction with traditional construction process results;
- alternative source of facilities funding—budget relief;
- access to systems experts and partnership with ESCO;
- potential to focus on improving the quality of the indoor environment—indoor air quality (IAQ);
- increase of the buildings energy renovation rate;
- code compliance;
- risk management;
- potential access to capital;
- solution to a specific need;
- guaranteed performance for a long period;
- value-based solution;
- accountability over the term of the contract;
- environmental benefits (significant reduction of CO2 emissions);
- long-term increase of the building value.
- …

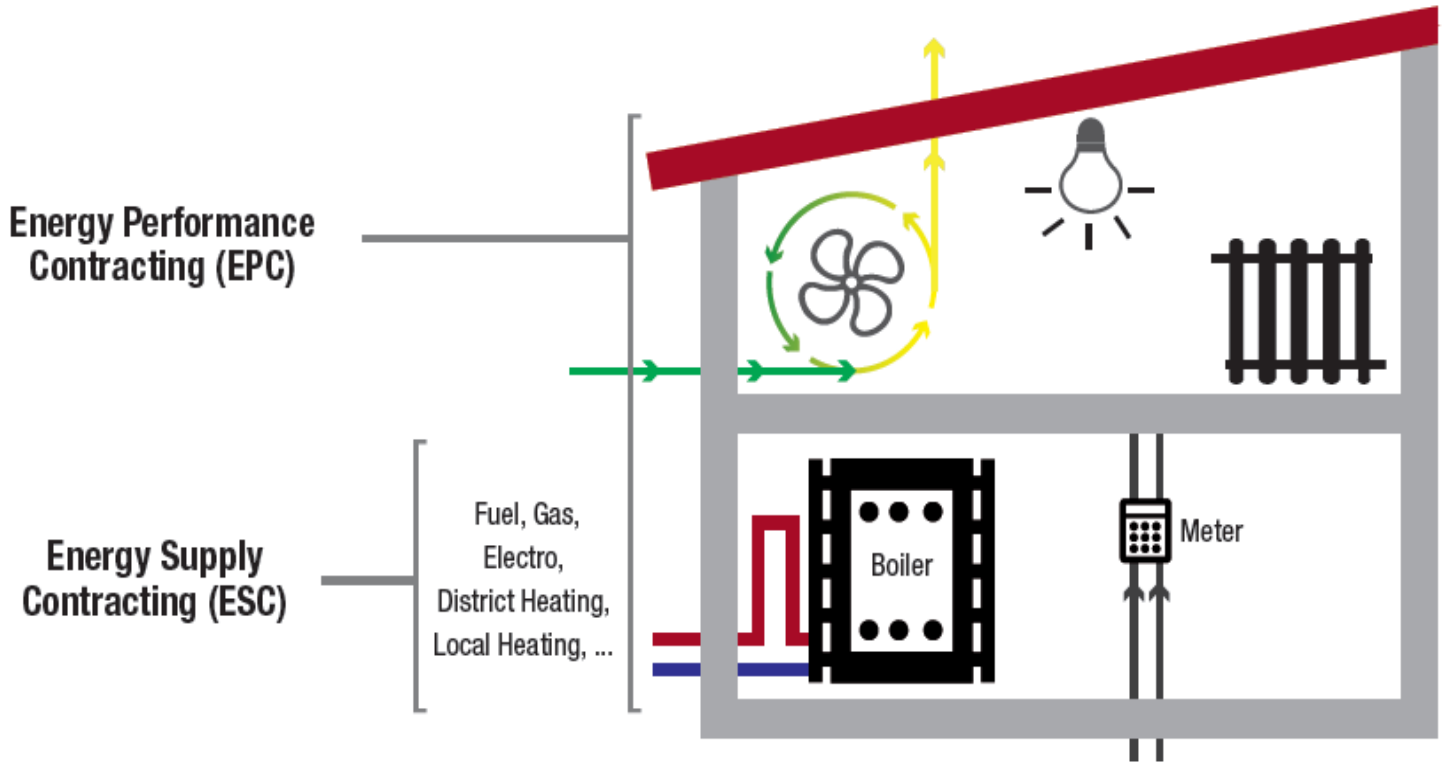
Expressly discuss them with the awarded ESCO!

When an EPC may not be the best choice

1. Ensure you are comfortable with a **long-term relationship** and the benefits this will provide before proceeding with an EPC.
2. It is important to ask if the **potential size of the EPC** carries the overhead costs of developing a project by an ESCO.
3. It is also important to ask if you are **willing to try something new and innovative**, given the potential benefits that could be realised.

The different types of energy services

There are two different basic models of energy contracting



Source: Energy Contracting, Successful energy services business models, eu.esco

The different types of energy services

Energy Supply Contracting (ESC) is the efficient supply of energy. The contracting partner provides products such as heat, chilling, compressed air or electricity. The subject of the contract is not the energy value but the utility value – billed in Euros per volume items of heat, steam or compressed air.

Energy Performance Contracting (EPC) involves the entire building – as one incorporated energy consuming unit. It is a type of long term contractual agreement where the customer benefits from new or upgraded energy equipment and the ESCO's remuneration is directly tied to the savings achieved by the reduced energy consumption. The cost of investment is paid back from the savings, and in case the ESCO fails to achieve that, they must cover the difference between the actual and the guaranteed costs. More than a funding model, an EPC is a programme of **practical engineered energy efficiency measures** that are implemented in buildings to deliver real energy savings.

Guaranteed savings, shared savings and chauffage

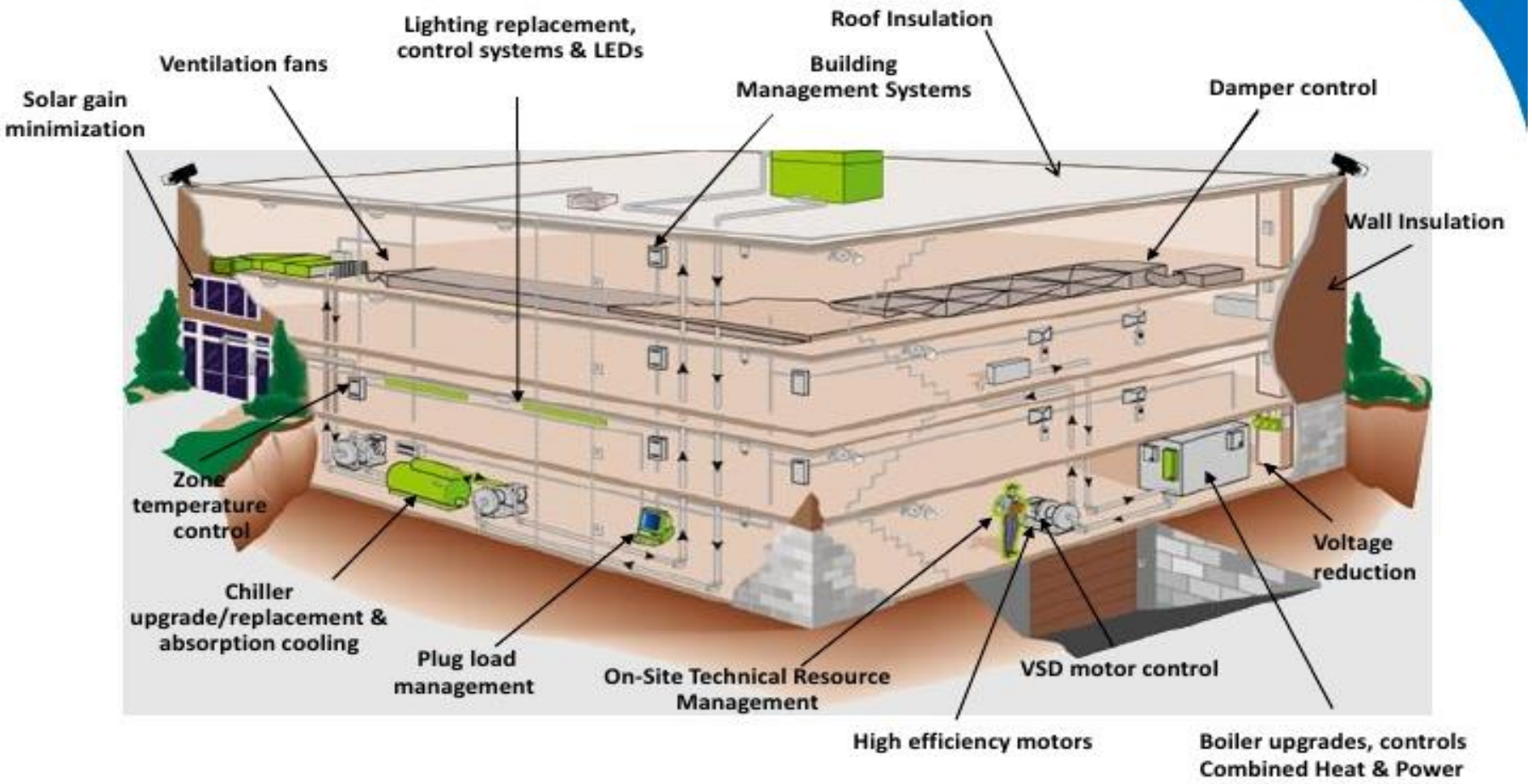
Guaranteed savings → all the contractor's costs (equipment, installation, mark-up, fees and so on) are repaid annually out of the savings as they accrue. The length of the contract (typically four to eight years) is usually chosen so that all costs are paid for out by the end of the contract period.

Shared savings → the business and the contractor agree to share the savings over the contract period according to an agreed formula. The actual cost of the measures is not included in the contract, and the business has no obligation to pay off those costs. In return, the performance contractor does not guarantee the savings. Contract terms are usually longer - up to 10 years - because it takes longer for the investment to be recovered, and the risks to the contractor are higher.

Chauffage or full energy/environmental services contract → the performance contractor effectively takes over the operation of a customer's utility or production facilities as well as upgrading them, and often pays the customer's utility bills as well. The business pays the contractor a regular fee equal to the utility bills before the project or some other negotiated fee.

The complete management of a building or facility by a contracted third party in some European countries is more common.

EPC can cover all projects



Source: Envido UK

Advanced Models of EPC (classification proposed by EESI project)

“EPC plus” - EPC with comprehensive refurbishment: the service of the ESCO is extended to comprehensive structural measures on the building shell like insulation or window replacement.

“Integrated Energy Contracting (IEC)”: it is a combination of EPC and ESC as it combines the objectives of reduction of energy demand through the implementation of energy efficiency measures and efficient supply of the remaining useful energy demand.

“EPC light” – energy management with guaranteed elements: it aims at achieving energy savings mainly through optimization and organizational measures with low or no investments in technical equipment.

“Green EPC” – EPC with special focus on renewable technologies: they are advanced EPC models with special focus on reduction of green house gas emissions.

End of Module 1