

Press Information

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Why Energy Performance Contracting is useful for most of existing public buildings?

The European Project EnPC-INTRANS recommends three appropriate business models

The main important element of energy performance contracting (EPC) is the energy saving guarantee, linked with a refunding of the complete project costs by the savings. In order to create capacities for EPC in Europe, the project partners from all nine participating countries of the EnPC-INTRANS project (“Capacity Building on Energy Performance Contracting in European Markets in Transition”) investigated the European Market, consulted stakeholders and published the results in the study: “Adapted business models for energy performance contracting in the public sector of the EnPC-INTRANS partner countries” Cooperating partners defined three distinct types of EPC business models that had proved to be successful for different refurbishment levels. All models are based on the refinancing of costs by savings, but the extent of the measures included and the linked risks, costs and contract durations are very different. Participating countries are Croatia, Germany, Greece, Latvia, Romania, Serbia, Slovakia, Slovenia and Ukraine.

The first model is the EPC light business model, which is characterized by savings achieved by optimizing the operation of all technical devices in public buildings. EPC light also entails the implementation of an energy management system as well as the listing of further energy efficiency measures. Because the contract duration is only two to three years, this model is suitable for all public buildings with energy saving potentials – the majority of the public building stock. The ESCO bears the energy savings risk while municipality mostly receives a share of the savings.

This model is an approach requiring little effort for both partners, and particular suitable for SMEs that are interested in participating in the ESCO market and in gathering technical know-how and experience in the market. Furthermore, municipalities profit from the introduction of energy management systems linked with an energy saving guarantee and a professional refurbishment concept for their buildings.

First experiences with this model were collected e.g. in Berlin-Pankow, if energy savings of

nearly 10 % were guaranteed by implementing EPC light in 15 schools and administration buildings. The ESCO received nearly 50% of the energy savings for financing the services.

The second one is the EPC basic business model which includes the implementation of technical measures. Usually, the contract duration ranges between 5 and 15 years and the saving guarantees range between 20 and 60 %. The ESCO bears all economic and technical risks and it is accountable for planning, instalment and financing of energy saving measures, as well as for maintenance of all installed technical equipment. Because the property of the technical equipment belongs to the public entity, there are no great risks for municipalities in the case of ESCO bankruptcy.

Many public city administrations in Europe already apply the EPC basic model and cooperate with proficient ESCOs. The European hot spots are Austria, Czech Republic, France, Germany and United Kingdom, but emerging markets also exist in other European countries.

The Slovak radio energy saving project is a very interesting best practice project: The ESCO invested almost 2.26 million Euro for the installation of a new heating generation system and an IT based control system. The savings guarantee was 18,170 GJ/y (5,051 MWh/y) within a contract duration of 6 years, which is nearly 31% of the basic energy consumption. Because the ESCO overachieved the savings guarantee (approximately 23,000 GJ/y or 6,394 MWh/y), it received 50% of the additional savings.

Finally, the EPC plus business model contains comprehensive refurbishment measures, including insulation measures on the thermal building envelope. Higher investment costs lengthen the payback period and therefore the contract duration can be up to 10-20 years. Furthermore, EPC plus projects mostly need co-financing by public subsidies, public funds or allowances by the building owner, whereas the energy savings can be higher than 70%. It's also possible to integrate comprehensive building refurbishments in bigger building pools, which means that one or two of several buildings are completely refurbished through cross-financing by the savings in all buildings.

Nevertheless, in practice, there are fluent transitions between the three business models, e.g. the insulation measures are sometimes part of EPC basic projects. The most important features of each model are documented in table 1.



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These three business models offer a widespread application of EPC depending on the special circumstances in buildings and the existing legal, economic and administrative framework conditions in the countries. Therefore, project partners analysed essential barriers as well as existing incentives. Main obstacles are the existing procurement and accounting rules for public authorities, the lack of understanding of the EPC concept, the complex decision making processes in public authorities and the lack of experience in the calculation of baseline consumption. Otherwise, the political commitment for energy efficiency, the energy efficiency related laws and existing standards for public buildings are very helpful incentives to carry out EPC projects.

Project partners will use the gathered knowledge for further qualification activities. The study as well as additional project information can be downloaded from www.enpc-intrans.eu.

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