

ESCO in the residential sector – the case of Győr, Hungary

Lessons for SMEs:

- ESCO systems are not easily understandable for the private owners, therefore it is important to find the right people who can act as intermediaries towards the communities, and it is equally important to simplify the technical, financial and organizational messages around the ESCO concept.
- As ESCO schemes have several actors involved it is important to build good connections with the main actors in advance: e.g. municipalities, banks, utility companies. The partners should be reliable as the uncertain behavior of the main actors would destabilize the whole scheme.
- It is more economical to implement a project if there is an integrator in it. It can be a cooperative or a property management company with several buildings in its portfolio.
- The residential segment of the construction industry is to a large extent emotionally driven. You need good communication skills (and a lot of patience...)
- Even though ESCO schemes are based on financial savings, the decisions of the residents are not purely based on that. You have to be able to explain (visualize if possible) the non-financial gains as well.
- You have to be democratic and autocratic at the same time: find a smaller group of people to make the strategic decisions, and allow the whole community to choose from a reduced number of options (otherwise it will be an endless decision making process).
- ESCO contracts need to be flexible as prices and interest rates can change over time. Both parties should see their risks in advance, and the contract can be renegotiable. Moreover, an ESCO contract can rarely be longer than 8-10 years in this sector as the residents can hardly plan for a longer term. Your offer should reasonably fit within this duration.
- You have to decide whether you will be operating the result of the renovation, (whether you are present at the location on an economic way) or it is better to contract it out.
- The technical risks can be mitigated by requiring strong guarantees from the constructors and by a tight quality control process.

Storyline

EnergSys Inc. developed a new, ESCO-based project scheme (including both financial and technical aspects) for large scale retrofitting projects for system-built residential buildings and looked for possibilities to implement it. EnergSys found a reliable partner in the city of Győr, namely the 30th Housing Cooperative that consists of 65 buildings (1,683 flats) that are located in 3 different areas in the city. An agreement was signed between the two main partners, in which the stakeholders agreed on a 5-10 year cooperation. The aim was to reach at least “B” level energy efficiency in each building and in parallel improve the comfort level of the flats.

After 9 months of strategic preparation the project started at the end of 2011 with the elaboration of annual implementation plans. There are only 5 buildings completed yet, and the continuation turned out to be uncertain because of the volatile subsidy intentions of the local municipality, and the continuous uncertainties concerning the state subsidy scheme.

Although the cooperative consist of 65 buildings (where the flats are owned by the individual residents, while the common areas, building engineering systems, and the building structure - walls, slabs, roof and windows- are owned by the cooperative) each building had to approve the renovation plan of the specific building separately. 2/3 of the owners had to agree on the project in each building (according to the law 50% + one vote would have been enough, but the local municipality insisted on increasing it).

The whole process was prepared, assisted and after the completion operated by EnergSys in the framework of a 10 year ESCO contract.

The product (value proposition):

The ESCO contracting system is currently not very popular among privately owned residential buildings, neither on the demand side (home owners' associations) nor on the supply side (companies) due to several reasons, like the complexity of contracts that contain performance guarantee that the residents can hardly understand (and can hardly trust), while the businesses also prefer working with commercial partners, industry or public sector clients rather than residential buildings with dozens or hundreds of individual owners. (These difficulties however reduce competition on the ESCO residential market.)

EnergSys had the choice to enter to the renovation market either as a company that is responsible for organizing the renovation process, or a company that implements some of the renovations, or a company undertaking the operation of the new engineering system. As ESCO was not a phrase with bad reputation at the end of the 2000s EnergSys created a whole ESCO framework in which it has a long term relationship with the home owners' association and takes some of the risks for the results in the form of a performance guarantee. We have to emphasize that the most frequent reason for being contracted as an ESCO – third party financing in which the ESCO company brings in the financial resources and entitled to put an extra margin on it – was not present in the Hungarian case as the condominiums and cooperatives were eligible for state and EIB supported loans for the renovation while ESCOs were not, so the buildings themselves could access better financial resources than the ESCO companies.

In addition EnergSys hoped that by working with a large cooperative it can implement a larger scale project with the assistance of the cooperative that might be able to act as a coordinating entity between the company and the individual buildings. This way the economy of scale could have brought business advantages.

EnergSys also had to overcome another barrier (besides the organizational issues) as the state subsidy on which the financial scheme was built was terminated by 2010. Previously, from 2001 a subsidy scheme existed and originally the state provided 1/3 of the renovation costs, while the local municipality paid the other 1/3 and the owners (practically the residents) paid the remaining 1/3. The interventions included typically some or all of the energy efficient works like change of the windows, insulation of the facades, rooftops and basements, the renovation of the engineering system and mounting PV panels. Between 2010 and 2015 no state calls were announced, and the subsidy was relaunched only in spring 2015 with much stricter conditions. In 2010 EnergSys had to work out another financial scheme. It was accomplished thanks to the offer of the European Investment Bank through a commercial bank, which offered 14% of the loan amount as a grant for the investment plus favorable interest rates. In addition state subsidy on the interest rates could be used and the local municipality also promised to contribute to the cost by an equal quarterly payment up to 20% of the investment costs. This made the product financially feasible. In practice the cooperative took a 10 year loan from a commercial bank (Raiffeisen bank) for 100% of the investment costs and 14% of it was used as a bonus (from EIB) that reduced the amount of loan when the project was completed. The municipality and EnergSys contributed to the monthly installment.

According to the ESCO contract EnergSys guaranteed 30% energy savings. The financial savings of it were divided into three parts: 1) contribution of the monthly instalment of the renovation loan, 2) financing the operation of the system which is implemented by EnergSys and 3) reduced district heating costs, in most cases by 5-10% of the original heating costs. (In practice the energy savings were between 52-64%, and the financial gain of it was distributed among the company and the residents.) EnergSys guaranteed the energy savings based on a fixed amount of yearly consumption, which was the baseline (kWh/year, GJ/year), and the cost savings were expressed in HUF/year, for 10 years, depending on project costs.

The technical content of the interventions were somewhat different in each building, but in general it contained: window change (mostly in the commonly used areas), wall insulation, upgrading of the heating and air circulating system and the provision of solar panels if possible.

The technical content of the interventions had strict cost limitations: the realistic financial barrier to accomplish the aims was not to exceed the 7-8,000 euro/flat intervention costs, or 30-40 euros/month increase in the common costs – after deducting the possible grants and subsidies. In addition the affordable loan payback time could not be more than 10 years.

The other thing that limited the technical content was the resistance of the local district heating company which is interested in selling heat and optimising its delivery system, and is opposed to installing alternative energy sources (like solar panels).

EnergSys, the ESCO company, provided the following services:

- The whole concept was developed by EnergSys, and the company contacted Raiffeisen bank that provided the EIB loan
- In the first stage all the buildings were technically assessed by EnergSys and the investment costs were calculated
- EnergSys worked out different technical and financial options for each building that was interested, and informed the owners at the general assemblies, where the decisions were made on the options
- EnergSys assisted the tendering process for the construction works (the participants were selected from the network of EnergSys but the Cooperative members were also entitled to suggest new companies to be invited). Due to the cautious tendering and selection process the price of realization was about 5-25% less than the usual market price.
- The construction works were controlled both by EnergSys and the Cooperative through independent technical supervisors
- EnergSys provides the heating service for the buildings as it buys the heat from the district heating company and forwards it to the building throughout the new heating centres (that were constructed in 2007). This is the most risky element of the project as the savings depends heavily on the price of district heating. In Hungary for example there was an artificial decrease of all housing costs through government orders, which made the financial scheme very uncertain.
- EnergSys as an ESCO company provides the operation and maintenance of the equipment and structures built in during the retrofitting for 10 years according to the Operation Contract between the Cooperative Community and EnergSys. In this framework – among others - it provides a monitoring service (information on the consumption on an on-going basis).

The market segment:

In Hungary about 96% of the flats in multi-unit buildings are in private ownership. (All of them could be considered collective self-organized, so CSOs). The privately owned multi-unit buildings in Hungary can be either condominiums or cooperatives. In the first case all the units are owned by the residents who own a portion of the common spaces. Condominiums always consist of a single building. A cooperative can occupy several buildings, in which the units are owned by the residents, and the common areas – like staircases – are owned by the cooperative.

In the case of the Győr programme the 30th cooperative consists of 65, 4-10 storey system built buildings. The owners belong to the lower-middle class. Taking into account that the former state+municipal subsidy covered at least 66% of the renovation costs, most of the buildings were reluctant to join to a programme in which all the subsidies could reach “only” 40%. The residents wanted to wait for new state subsidies. (2/3 of the owners had to support the project, meaning that this proportion of them had to be in a proper financial state and willing to vote for the interventions.)

The energy efficient renovation of the buildings means four major things for the inhabitants (according to the experience of the company):

- Direct savings in heating and hot-water bills (these buildings are mostly district heated)
- Better comfort level as the flat becomes less noisy, cleaner and the temperature is more stable (however in practice many of the inhabitants sacrifice their comfort level in order to reach a higher level of financial savings, by turning down the temperature and opening the windows less frequently; as a consequence blight can appear if ventilation is not adjusted to the insulation of the building)
- Improved appearance of the building, nicer living environment outside and inside the building
- Lower operation and maintenance costs of the building
- Rise of the real estate value of their apartment

Some of the factors can be more important to certain families while the others may value other factors. The company’s experience is, however, that despite the expected significance of the financial savings factor, it turns out not to be the most important. People tend to pay more for a bank loan than their savings in order to get a nicer and more valuable building with a higher living standard (in the case of Győr the residents had to pay about 30% extra compared to their former heating bills in order to pay back the loan, however about 50% of the bank instalments were paid from the energy savings). They may have net savings after the duration of the loan (after 8, 10 years) but not in the short run. The biggest incentive tends to be the nicer appearance of the building and the nicer living environment.

However there seems to be a limit for each community above which the owners are not willing to go. This seems to be about 30-40 euro/apartment/flat independently of the added value and the energy savings.

Pricing:

The pricing structure for the services was broken down into stages:

- The elaboration of the whole scheme and the technical audit of the buildings were done for free in order to create commitment by the cooperative and the municipality.
- The assistance provided for the tendering for constructors and the quality control was priced independently.
- In the Operation Contract the ESCO fee is set for the tasks. Operation fee is below 5 Euros/flat/month.
- EnergoSys also benefits from the energy savings above the guaranteed level as the company also provides the heating services (buys the energy from the district heating company and sells it to the buildings). The extra benefits of the energy savings is however shared between the residents and the ESCO company, meaning the residents got further reductions from their heating bills.
- In addition it is important to know that the cooperative collects the heating bills, the cost of which is included in the common costs, meaning that the cooperative is the intermediary that takes the risk of non-payment and the ESCO company does not suffer a financial loss because of the arrears.

The shared part of loan payments is guaranteed by security deposit or retention of contractor's fee, and bank guarantees as well. In order to reduce the third part risk of the performance EnergoSys gets warranty for quality, liability insurance and property damage insurance. In addition, to cover the risk of energy price and interest rate changes, EnergoSys separated a reserve fund from its equity.