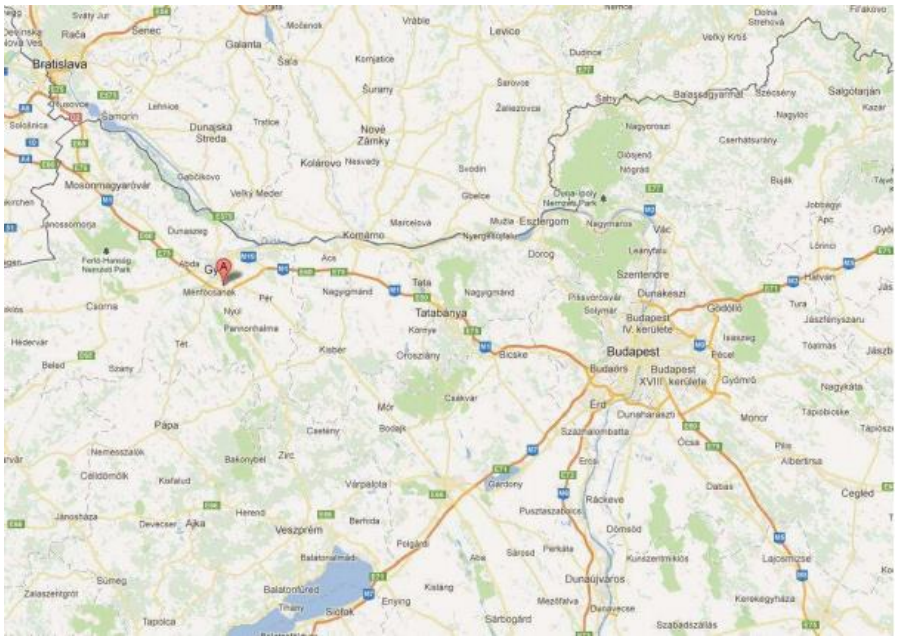
Raab Sol (Hungary)

Introduction:

Raab-Sol project was started by the initiative of EnergoSys, an ESCO company which prepared the financing and implementation of government subsidized Energy Efficiency retrofitting proposals. Energosys found a reliable partner in the city of Győr, a housing Cooperative that consists of 65 buildings (1683 flats) that are located in 3 different areas in the city (Marcalváros, Nádorváros and József Attilla quarter). The cooperative houses lower-middle class households living in 4 to 10 story high system-built buildings. The goal of the project was to develop a long-term cooperation between Energosys and another company. An agreement was signed between the two main partners in which the stakeholders agreed on a 5-10 years cooperation. The aim was to reach at least "B" level energy efficiency in each building and in parallel to improve the comfort level of the flats. At least 30% savings in energy was targeted with the different compilation of technical solutions: window change, wall insulation, upgrading of the heating and air circulating system and the provision of solar panels if possible. The project included not only the implementation of the renovation but the operation of the heating service for 8-10 years in the framework of an ESCO contract. The financial scheme was supported by the European Investment Bank and the municipality of Győr altogether providing about 35% of the investment costs. The communities of each building decided individually whether or not they want to be included into the project. So far 6 buildings have been completed as the cooperation with the municipality and the municipal district heating company provides an uncertain framework that changes year by year.



Motivation:

From the housing cooperative there were four main motivations to embrace the project. (1) Relieve from financial burden. At that time, there hadn't been any financing instrument, which would have supported the flat owners with low income to meet the costs of retrofitting. (2) Receive guaranteed result. As an innovative aspect the developed solution considered that almost 30% of the investment costs can be financed from energy savings by adequate ESCO guarantees. (3) receive non-refundable subsidies from the municipality and (4) benefit from loan financing. It is because of the long term loan payback period and the favourable conditions of the applied loan, the anticipated amount of the common costs became acceptable for the flat owners. Several impacts had been resulted from the project, such as the high construction quality, the guaranteed energy savings and the utilization of renewable energy made it possible to achieve a significant operation cost reduction for the residents. Besides that, they could gain more favourable living conditions and increase of the market value of their properties.

Community development process:

The main obstacle during the project development was convincing the residents about the importance of the recommended options. During the project, EnergoSys acted as a facilitator and continuously cooperated with the Housing Cooperative. The tasks described in the Cooperation Agreement had been properly fulfilled by the company, and they accomplished their tasks thoroughly as a reliable partner. The Housing Cooperative always relied on advisory or mentor companies, even before the Raab-Sol project. The ESCO company together with a consultancy company (Lagross Ltd.) on behalf of the Housing Cooperative had complied with the requirements towards the construction and installation contractors, which met the quality criteria, local and EU regulations. In finding contractors, the ESCO company asked for a quote at least from three different companies per disciplines. The main criteria of the selection were the conditions of the guarantees of quality and the price.

Some issues during the development process:

Practically, there is no major issue during the development of the project. Raab-Sol has relatively loose connections to land use regulations as renovation (by definition) in general does not interfere with the already existing structure of the built environment. Land use regulation is basically about density and layout of a certain neighbourhood which should be respected rather in case of new construction. Thus in case of the Raab-Sol project none of the regulations on land use was affected as the interventions did not exceed the building level. Buildings involved in the Raab-Sol case didn't need to submit an application for a building permit. They are not in a protected area and did not plan to implement measures that involved modification of main structures. Considering the energy-

efficient measures that were included in the Raab-Sol concept it was clear that the project will not require building permits. If a building permit had been required, there would have been additional procedural and financial resource needs which might result in a fundamentally different project. However, there are still a lot of official standards, documentations and requirements in several sectoral regulations which result in several permission processes concerning different authorities (e.g. fire-service, district-heating service, gas-provision company, national parks). In addition, Raab-sol project needs to provide document related to technical and financial report to all stakeholders of the project, namely:

- Municipality: Project progress report, technical content and financial accounting on district and building level, energy savings and CO2 reduction
- Financial Institution: technical documentation and financial accounting on building level
- European Investment Bank: technical documentation and financial accounting on building level, energy savings and CO2 reduction
- Housing Cooperative: progress report
- Individual Building Communities: technical documentation and financial accounting on building level

Critical information/tools for the project:

In the preparation phase, the following information was important for the success of the project:

- technical and energy status of the building and its energy savings potential.
- energy consumption of the previous 5 years at least
- at least two versions of renovation alternatives as well as
- those impacts on costs and estimated energy potentials (energy savings, reduction of emissions)

In the implementation phase, the following information was important for the success of the project:

- tender documentation to select a contractor
- conditions of loan financing: criteria of contracting, the expected amount of repayment
- specifications of implementation: definition of the technology and technical parameters of the project, schedule of the implementation, warranties and costs
- anticipated changes in the common costs as a result of the project implementation

In the operational phase, the following information was important for the success of the project:

- the terms of the contract concluded with the ESCO management company, system configuration parameters
- operating costs, cost accounting procedure

Lesson learned:

In case of building groups and complex city-wide projects, it is recommended to establish a long-term cooperation with management companies as was done in the Raab-Sol project. Reflecting on the process, there are several important points that the project can learn for future project. First, working with the communities, the project coordinator should discuss the payment conditions more properly with the local government and the commercial Bank. Secondly, more information should be provided for the residents about the construction and installation work, and later about the operating conditions and methods from the construction company and the ESCO Company. Lastly, a regular public forum is necessary to solve problems and share the achieved results and the changes could be discussed and can be agreed.