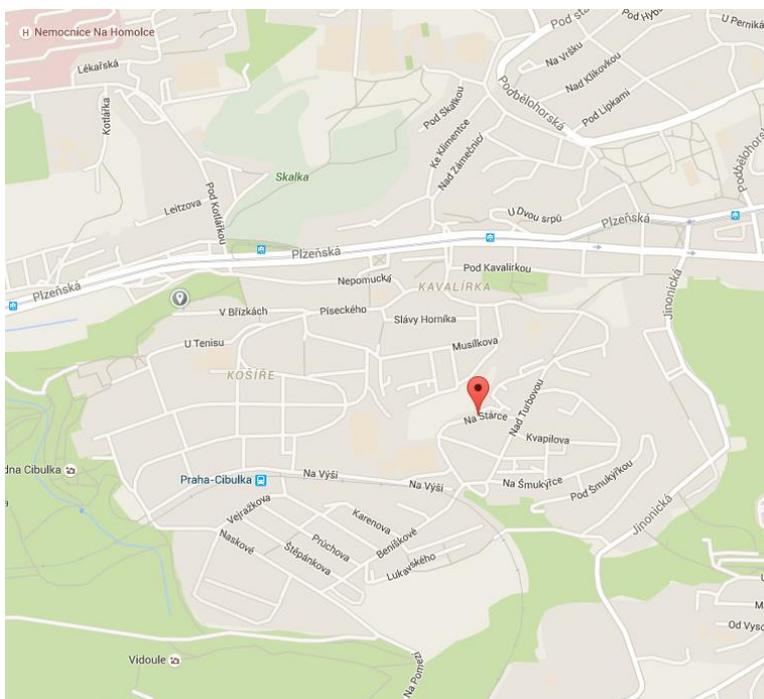


Na Starce (Czech Republic)

Introduction:

The Na Starce project is located in the Košíře district of Prague. The project focused on applying energy-efficiency improvements in a 23-dwelling, 3 to 5-storeys, 3-building multifamily residential complex. The flats are owned by private persons associated into a SVJ (Společenství vlastníků



jednotek - Association of dwelling owners). One of the members of the association is a housing cooperative who used to be the owner of the building before the privatization process. The cooperative acts as the appointed owner, and at the same time, it is responsible for the management of the property. In 2008 the owners took the initiative to improve the energy consumption of the building. At the time both the increasing heating costs and the thermal discomfort were the main concerns. The residents felt that these improvements would not

only save money spent in energy in the long term, but also improve the value of their property. Leadership from some of the most energy-conscious dwellers was the catalyst to bring the topic to the attention of the association.

Motivation:

Several motivations have triggered the development of the project. First, there has been an increase in heating cost over the last decade as a result of fast growing need in energy. Secondly, the retrofitting project would have a positive impact on the property value. However, the main driving force of initiating the project was the opportunity to make use of the government's financial tool.

The definition of the project scope was agreed on since the beginning. The project would consist only of applying an insulation layer to the external envelope of the building (also known as "external

thermal insulation composite systems” - ETICS) and replacing the original single-glazed wooden windows. These energy-efficient measures are quite common and their use is widespread in retrofitting projects in the Czech Republic, especially in residential panel buildings. While the SVJ was in the early process of considering the project a state-sponsored programme called “Zelená úsporám” (Green savings) became available. Unfortunately, there was uncertainty at the beginning at the project about the feasibility of the grant. The long process had also given a good opportunity for the owners to reflect on their real needs and motivations to start the project.

Community development process:

The group consisted of all the owners of three neighbouring semidetached buildings that account for 23 dwellings. Originally a housing cooperative was the owner of the property, after the privatization process ownership was transferred to private persons associated into a SVJ (Společenství vlastníků jednotek - Association of dwelling owners). Legally this housing cooperative acts as an appointed owner and at the same time was responsible for the management of the housing estate. The group of flat owners remained unchanged during the process. Disputes on some issues were resolved by democratic voting. Na Starce was a small scale project and therefore, a professional facilitator was not present. The community appointed a facility management team whom in turn dealt with the contractors. The procurement process was divided into small, manageable stages: building assessment (technical survey), energy audit, design of refurbishment, retrofitting works and site supervision. Traditional contracting was used for each of the stages allowing the community a full control over the process at the expense of personal time involvement. Once detailed specifications were available for construction, SMEs were invited to bid their offers. Since the management and community leaders knew some companies, this was done through a short list of trusted providers. The main contract for the retrofitting work was agreed as a one-stop-shop for all the works including thermal insulation of the building façade, partial replacement of windows and other minor repairs needed. As the scope of the project was well defined since the beginning, a fixed fee contract was signed and successfully executed. The community was satisfied with the execution given that the contract included all the typical provisions regarding the technical specifications of the works, time schedules, warranties, paying schedules and penalties.

Some issues during the development process:

While the potential financial contribution from the state programme gave an additional momentum to the decision to start the project, some technical requirements were needed in order to apply for the grant. For simple energy-efficiency retrofitting projects like the “Na Stárce” case, there is no need to comply with any land use regulations as long as the use and structure of the building remains unchanged. However, in order to execute this project it was compulsory to get a building permit. Projects involving the retrofitting of the external envelope of a building require such permit

from local authorities. The process of applying for the building permit was led by the association of dwelling owners. Since the design of the retrofit was simple, there was no need to deal with many unexpected requirements from the local authorities. One minor additional requirement that came from the authorities to comply with the fire code was the request to add canopies above the main entrances, and apply rock wool insulation on the ceiling in the corridors. These requirements were included in the project design and implemented as requested by the authorities. From aesthetical point of view, the suggestion of the authorities was to keep the colour of the external plaster similar to the original one.

On the other hand, more specific requirements came from the state programme “Zelená úsporám”. In order to be able to apply for a contribution from the state programme, certain technical requirements needed to be met. These requirements were the main criteria used to choose the energy-efficient solution for the retrofit of the external envelope of the building. The application for the building permit was prepared in late 2009 and timely issued in spring 2010. However, the beginning of execution was postponed by the SVJ until the fall of 2011. The reason was the administrative delay and uncertainty of the result to get the state grant. Regardless of the outcome of the state grant, the SVJ finally decided to execute the project between September 2011 and December 2011. The authorities granted the final building approval in spring 2012, with no objections to the project execution.



In the technical terms, the Na Strace project aimed to achieve the decisive energy target set by the requirements for the application of the state grant. These requirements called for a minimum calculated energy consumption for heating to be

achieved ($\leq 55 \text{ kWh/m}^2\text{a}$), and at least a 40% decrease of energy consumption compared to the original state of the building. The design of the energy-improvement solutions were expected to comply with these requirements without problems. The aim of the SVJ was to meet these minimum requirements as they guaranteed a considerable improvement of the energy consumption and it was the financially, the most attractive alternative. Support in the decision making for the technical solution came from the hired energy specialist who designed the project.

Critical information/tools for the project:

- Requirements and knowledge of the application process for the state grant
- Information and negotiation of the building permit process with city authorities
- Coordination tool between the designer and the community

Lesson learned:

Reflecting on the process, the Na Starce project required the knowledge of the application process for the state grant. Information and negotiation of the building permit process with the city authorities was also an important factor. Ultimately the designer and the community leadership coordinated these efforts, so there was no need for further information or communication tools. The project started with a rather low ambition which left some renovation parts in the building unfinished. For instance, the repair of internal common areas was excluded from the project and this might have been coupled with the repair of the exteriors, giving the discomfort for the residents during the construction process. On a positive note, the project has become a learning curve for the association which is now more organised and more knowledgeable in how to undertake other project in the future. For future CSO retrofitting projects special attention should be given to the newest energy-related requirements, for example the amendments to the Energy Management Act which now implements the European Directive 2010/31/EU, and other new regulations regarding energy performance certificates.