

Vackor kindergarten

- Location: 1188 Budapest, Csolt Street 4.
- Use of the building: Kindergarten
- Built: 1978-1982
- Heated gross floor area: 670 m²
- Primary energy before renovation: 264.63 MWh/a
- CO₂ emissions before renovation: 50.96 t/a

Description of the pilot project:

- *Short description of the building (use and purpose): Vackor Kindergarten accommodate 98 children, 9 teachers and 1 technical staff.*
- *What was the state before renovation: Its main features are encompassing walls: PREMISOL external panels, inside partition walls are made of ALBAFAL partition panels.. The inner frontage court wall is not insulated; furthermore, the big glass panels of the corridor are out fashioned, metal framed doors and windows with a poor insulation value.*
- *EE measures implemented: insulation of walls 10 or. 20 cm EPS; metal windows replacement; insulated. PVC; flat roof installation 30 cm; XPS above ceiling 30 cm; insufflated insulation; heat ventilation system + heat; back ventilation; 37,125 kWp solar panel; installation*

Quick summary



Main work-steps/milestones:

- Acquisition of an external expert
- Preparation of the feasibility study
- Preparation of the tender documentation
- Acquisition of an ESCO company

Documentation needed:

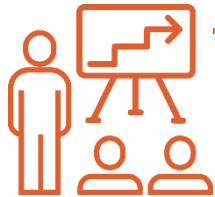
- Collect current status data
 - Plans drawings
 - Energy consumption data
 - Feasibility study
 - Tender documentation



Stakeholder involvement:

Leading: municipality workers and experts, users of the target buildings

Other: local residents, ESCOs, authorities,



Investment and financial model:

Investment cost: 569.912 €

Financial model: ESCO



Results:

- Expected savings: **9.760 EUR annually.**
- Primary energy savings: **262,035 MWh/year**
Emissions: **50,58 tCO2 annually**
- Return on investment (ROI): **25 years**
- Energy performance classification: **3,87 kWh/m2**

Lessons learnt



Biggest milestones:

- Preparation of the feasibility study
- Preparation of tender documentation
- Acquisition of the ESCO company

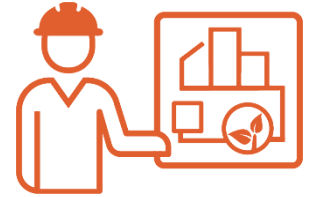
Biggest obstacles:

- Choosing the most suitable building for nZEB
- Availability of ESCO tender documentation sample.
- Missing hungarian good examples
- There are few ESCO companies operating in the hungarian market.



What could've been done different?

- Cooperation with foreign municipalities that have already made such investment (nZEB & ESCO)



What would we recommend?

- Cooperation with municipalities that have already made an nZEB & ESCO investment.
- Availability of Energy Performance Certificates for the building stock.
- Use of the experience and tools and documents were developed by the eCentral project

• For more info: (institution website, e-mail from a relevant contact person...)