



European Union European Regional Development Fund

Passive Firehause in Holešov with the support from OP Environment, Ministry of Interior and the Zlín Region

Tomáš Perutka Energy Agency of the Zlín Region



Online Study Visit - Zlín Region, Czech Republic | Thursday, January 21, 2020



Primary energy consumption = 96 kWh/(m².year) Heating consumption = 11 kWh/(m².year). $A/V= 0,41 \text{ m}^2/\text{m}^3.$





The new fire station is located in the Holešov industrial zone (18 km from Zlín) and it is the first firehouse passive building in the Czech Republic.









Windows $U_w = 0.65 - 0.76 \text{ W/(m^2K)}$

High-speed gates with fast opening 0,5 m/sec $U_d = 0,614 \text{ W/(m^2K)} a U_d = 0,513 \text{ W/(m^2K)}$

Ground floor insulated with XPS tl. 280 mm, $U = 0,12 \text{ W/(m^2K)}$

Fasade insulated with EPS grey tl. 300 mm, $U = 0.12 \text{ W/(m^2K)}$

Roof EPS 200 tl. 200 mm + EPS grey tl. 200 mm, 400 mm, U = 0,09-0,10 W/(m²K)

Heating: Hot water: Air: Lights:

- 2 natural gas boilers 37,1 kW each
- 1 500 I storage tank heated from 13 pcs of solar panels (thermo)
- 5pcs of decentralized recuperation units
- LED technology in all rooms



The "Operational Program Environment 2014 -2020" (OPE) supports the construction of passive buildings under Priority Axis 5 Specific objective 5.2: Achieve a high energy standard of new public buildings

Total implementation costs including project preparation: CZK 59.9 million (app. 2,22 Mio EUR)

Costs breakdown:

OP Environment (ERDF): Subsidy of the Zlín Region: Ministry of Interior of the CR: CZK 14.9 million (app 552.000 EUR) CZK 5.0 million (app. 185.000 EUR) CZK 40.0 million (app. 1,48 Mio EUR)

Realisation period: November 2018 – March 2020







- The first building of the fire station in the passive standard in the Czech Republic
- The first building of the public sector in the passive standard in the Zlín Region
- > non-renewable primary energy only 96 kWh / m2.year
- Specific annual heat demand for heating only 11 kWh / m2.year
- Heated floor area 1,138 m2







Challenges

- Overcoming persistent prejudices in society towards the construction of passive houses
- Installation of new technologies and quality materials
- The need for methodical guidance of fire brigade personnel for the introduction of energy management of the building
- Weaknesses in the Public Procurement Act
- Lack of qualified designers
- > The need to coordinate professional designers with energy specialists







- Energy Agency of the Zlín Region (EAZK) processed the application for a 30% subsidy for the 61st call of the Ministry of the Environment within the OPE 2014 2020
- Introduction and implementation of energy management of the building is very important for the proper operation of the building in a passive standard, too. These implementations, analysis and evaluation are methodically led by EAZK.



































































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Project smedia

Thank you for Your Attention!

ENERGETICKÁ AGENTURA ZLÍNSKÉHO KRAJE, o.p.s.

www.eazk.cz

https://www.interregeurope.eu/lcdistricts/