



Name of the public building renovation:		Complete reconstruction of municipal head office SLOVSEF programme
Description	Category	Financial/Technical/Legal tool
	Address	
	Photo	
	Public sector contractor	Slovak Energy and Innovation Agency
	Characteristic of Public Building	Municipal head Office (public body)
	Date of Construction	1951
	Date of Renovation	2011
		
Implementation	Nature of the works	Thermal Insulation of External Walls - EPS thickness 80mm; Insulation of Unheated Floor of Attic - mineral wools 150 mm; Insulation of Unheated Floor of the Basement - EPS 60 mm; Exchange of Windows, Door and Glazed walls for plastic windows with insulation glazing; Exchange of Light Sources Renovation of Heating resource - installation of new condensing boiler
	Budget/Financial resources	State and Private financing
	Supervisor	EBRD
Energy savings	Methodology for savings calculation	Energy audit
	Savings calculation in 2012	Overall annual energy savings: 77,99 MWh
	Estimated savings by 2022	780 MWh
Assets of the project		Comprehensive renovation of building, Energy and Financial Savings, Increasing of Overall Usage of the Building, Increasing the Values of the Building, Prolongation of the Life Cycle of the Building Itself
Available results	What were the big problems in terms of energy efficiency to tackle	
	Has this building been already analysed and certified	Yes, energy certification has been processed after building's renovation
	What are the key innovative energy efficiency measures undertaken through renovation	In comparison to initial conditions of the building all measures undertaken through the project have innovative character
	What are the measurable improvements in terms of energy efficiency in electricity and heating	Savings of the fuel, electricity, maintainance costs, emissions of CO ₂ , 77,00 MWh per year
	Simple payback period	10,1 year
Energy Efficiency Measures	Envelope	Wall: External wall made from kiln brick with thickness 45 cm (previous coefficient of heat transition 1,28 W.m-2.K-1). Insulation: polystyrene expanded (EPS) in thickness 80 mm (R= 2,105 m2.K.W-1), silicon plaster silikónová in thickness 2 mm (R= 0,010 m2.K.W-1). Coefficient of heat transition of insulated building construction is 0,35 W.m-2.K-1.
		Windows: Draft of the measure resulted from the analysis of the current state of thermal characteristics of external aperture of building construction (doors and windows participated up to 13,3% on the overall need for heat to cover the transition heat loss. It was designed to replace 100% of opening structures for plastic - heat transfer coefficient of the frame U _f = 1,6 W.m-2.K-1, with insulation double glazing coefficient of heat transition U _g = 1,1 W.m-2.K-1.
		Unheated basement ceiling previous coefficient of heat transition 2,29 W.m-2.K-1. Insulation: polystyrene expanded (EPS) in thickness of 60 mm (R= 1,579 m2.K.W-1). Coefficient of heat transition of insulated building construction is 0,50 W.m-2.K-1.

		Unheated floor roofing space previous coefficient of heat transition 0,88 W.m-2.K-1. Construction insulated as follows: mineral wool in thickness of 150 mm (R= 4,054 m2.K.W-1),. Coefficient of heat transition of insulated building construction 0,19 W.m-2.K-1.
	Heating system	The boiler room in the building was morally and technically outdated its operation uneconomic. Replacement of old boilers for gas condensing boiler was carried out.
	Lighting	Light sources were unsuitable in terms of energy consumption. Exchange of light sources and luminaires wa carried out.
	Application of Evaluation Methods	The results will be verified by the International Protocol for validation and performance evaluation(IPMVP).
Sustainability of the Renovation	Design and Choice of Sustainable Materials	Materials and products used meet all technical standards and requirements All required certificates have been issued.
Building maintenance after renovation	Is in the building energy monitoring system?	The building is fitted by measurement devices of natural gas, electricity and water, which measured values are recorded at regular intervals of the building administrator.
	Water and Waste Treatment	Given that municipalities are required to implement the system for the separation of waste, at the municipal office building directly produced waste is subsequently separated.
	Who is in charge of the maintenance of the heating system of the building?	Municipality
	Are there any specific measures to raise energy awareness and to implicate users?	Brochures on Insulation Methods, Effective Energy Systems, Improved aesthetic appearance of the building
Transferability	Transferable aspects according to the partners in charge of this example of good practice	The project addresses the comprehensive renovation of the building. The ideal way which is possible and even appropriate to apply in other public buildings. Achievement of significant improvements in energy efficiency and reducing the costs of the municipality to ensure the purchase energy media.
	Transferable aspects according to all the partners of Serpente project	
Resources	Publications	Slovseff
	Web site	www.slovseff.eu
	Interviews	