



GOOD PRACTICE IN FINANCING THE RENOVATION OF PUBLIC AND RESIDENTIAL BUILDINGS

Tomas Chadim

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INTRODUCTION OF SEVEN:

- 1. SEVEn, The energy efficiency centre is a non profit and non governmental organisation**
- 2. We have been on the market since 1990**
- 3. We provide consultancy services in the energy sector and the environment. The main focus is put on energy efficiency.**
- 4. We are one of the most important organizations, which strive for the development of an energy efficiency market in the Czech Republic**



LIST OF FINANCIAL INSTRUMENTS

- ➔ Own financial resources or credit financial products
- ➔ Subsidy schemes
 - ➔ Operational Programme Environment
 - ➔ The Green Savings Programme
 - ➔ The Panel Programme
- ➔ Energy services - Energy performance contracting



OWN AND BANKING RESOURCES

- ➔ Own financial resources of the municipality and owners of the residential buildings have been decreasing since 2009
- ➔ Taking out loans is more difficult than before, because banks have established more strict rules for providing their products after 2009
- ➔ Municipality as well as the owners of residential buildings are more careful about increasing their debts



SUBSIDY SCHEMES

- ➔ The most important subsidy schemes in the Czech Republic are the following:
 - ➔ The Operational Programme Environment
 - ➔ The Green Savings Programme
 - ➔ The Panel Programme

SUBSIDY SCHEMES – OPERATIONAL PROGRAMME ENVIRONMENT

- ➔ The Programme is financed from the Cohesion Fund and the European Regional Development Fund, and from the National Environmental Fund of the Czech Republic and the state budget.
- ➔ The Programme has 8 priority areas and 2 of them are applicable to thermal renovation of public buildings (except for private or residential buildings)
- ➔ The amount of investment subsidy is usually 60% (public aid) or 90% of eligible investment expenses



SUBSIDY SCHEMES – OPERATIONAL PROGRAMME ENVIRONMENT

- ➔ Priority area No. 2 - The Improvement of Air Quality and Reduction of Emissions
 - ➔ Opportunity for financing the replacement of boilers
- ➔ Priority area No. 3 - The Sustainable Use of Energy Sources
 - ➔ Opportunity for financing the renovation of outside constructions of buildings – walls and roof insulation and windows and doors exchange
 - ➔ Opportunity for financing the application of renewable resources in the buildings



SUBSIDY SCHEMES – THE GREEN SAVINGS PROGRAMME

- ➔ The Programme is financed from the profit of sale emission credits (AAU units)
- ➔ The primary focus of the Programme is on residential buildings
- ➔ Main subsidized measures are:
 - ➔ Insulation of houses
 - ➔ Installation of renewable sources
 - ➔ Building new buildings in a passive energy standard



SUBSIDY SCHEMES – THE GREEN SAVINGS PROGRAMME

- ➔ The Programme started at 2009 and its first part will finished at the end of this year
- ➔ Acceptance of application was untimely closed at 2010 for too high demand
- ➔ Administrations of accepted applications and repaying of subsidy are in progress now
- ➔ Currently is prepared a continuation of programme which will begun at September/October at this year.
- ➔ The next part of programme will ofer investment sources and moreover some kind of advantaged loans



SUBSIDY SCHEMES – THE PANEL PROGRAMME

- ➔ The Panel Programme is focused on a renovation of residential buildings
- ➔ The Programme supports complete reconstruction of buildings (not only energy efficiency measures)
- ➔ The Programme doesn't offer investment sources, but only advantageous interest rates
- ➔ The Panel Programme was often combined with The Green Savings Programme

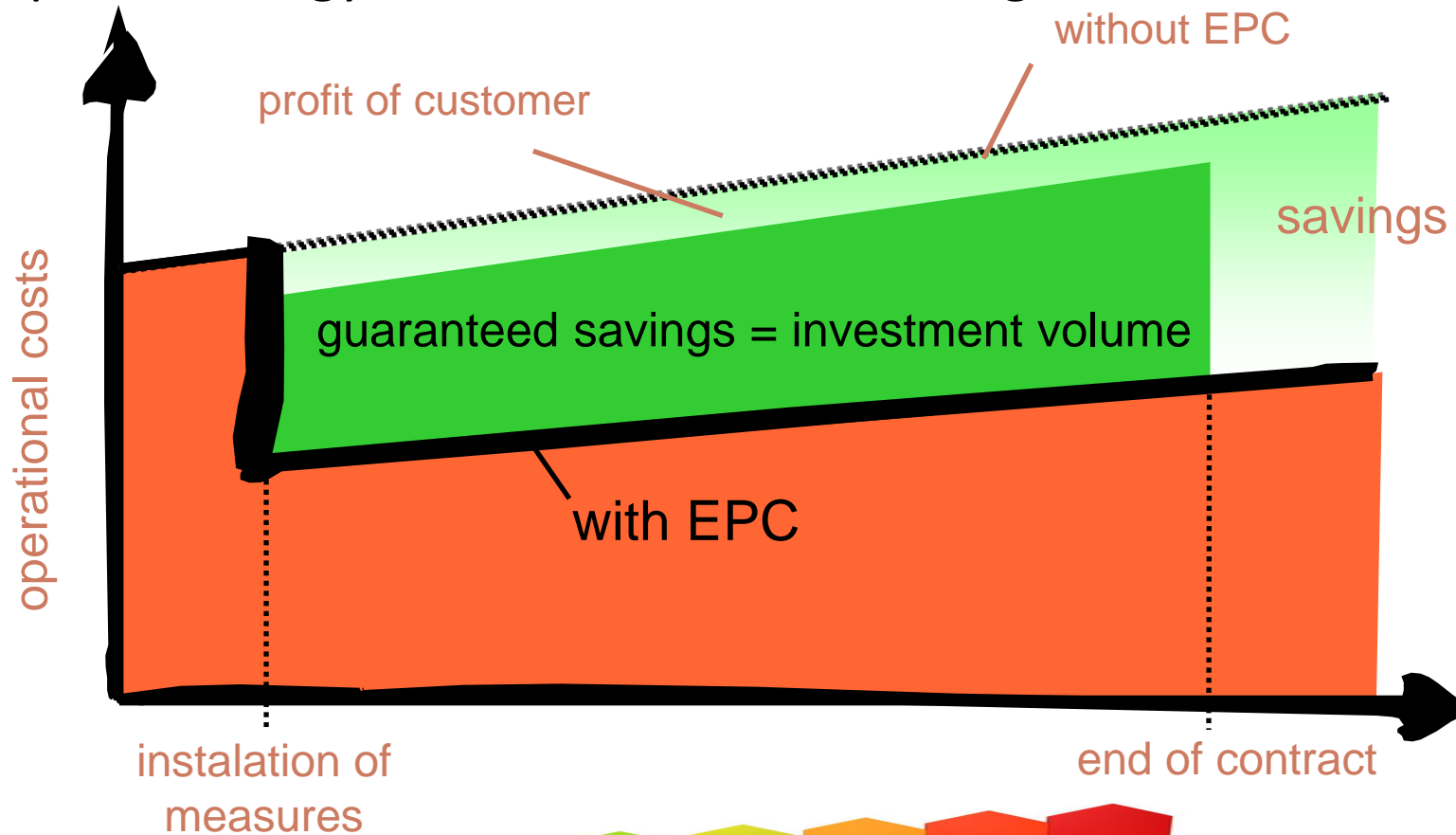


ENERGY SERVICES – ENERGY PERFORMANCE CONTRACTING

- ➔ Energy services are taken as one of the methods which lead to decreasing energy consumption in the Czech Republic
- ➔ Energy performance contracting (EPC) is an energy service which is currently very much demanded
- ➔ The main goal of EPC is providing a service which leads to energy savings and a guarantee of these savings.
- ➔ EPC is usually used for financing savings measures, because customers don't need to have their own investment sources. Measures are repaid from guaranteed savings.

ENERGY SERVICES – ENERGY PERFORMANCE CONTRACTING

Principle of Energy Performance Contracting





ENERGY SERVICES – ENERGY PERFORMANCE CONTRACTING

- ➔ Differences between the standard method of renovation of buildings and EPC
 - ➔ Both (ESCO and customers) have the same motivation – to achieve savings
 - ➔ ESCO accepts the majority of risks
 - ➔ ESCO is responsible for measures design
 - ➔ ESCO is responsible for measures installation
 - ➔ ESCO is responsible for financing
 - ➔ ESCO is responsible for achievement of savings
 - ➔ The customer is only responsible for further use of buildings and the payment of bills in the same amount as were his operational costs before EPC application

ENERGY SERVICES – ENERGY PERFORMANCE CONTRACTING

➔ Advantages of EPC

- ➔ Long-term contract which covers energy efficiency and savings
- ➔ Customer doesn't need any investment sources (only operational sources)
- ➔ ESCO bears the majority of risks
- ➔ Customer has only one contract partner

➔ Disadvantages of EPC

- ➔ Minimum size of project (in CZ, the minimum operational costs are around € 40 000)



GOOD PRACTICE – GREEN SAVINGS & PANEL SUBSIDIES

Reconstruction of residential building in Prague

- ➔ 120 flats, ownership – corporation of flats owners
- ➔ Measures – complete insulation of building
 - ➔ Insulation of envelope of building
 - ➔ Replace of windows and main doors
 - ➔ Reconstruction of inside main energy and water distribution systems
- ➔ Financing – combination of Green savings and Panel
 - ➔ Green saving – investment resources 0,5 Mio €
 - ➔ Panel – advantageous loan (low interest) 0,7 Mio €



GOOD – OPERATIONAL PROGRAMME ENVIRONMENT & EPC

Reconstruction of Secondary School in Prague

→ reconstruction of technology equipment

by EPC + boiler room operation

- investment 0,3 Mio EUR (financing from future energy saving operational costs)
- duration of EPC contract – 8 years



→ insulation of building + exchange of windows

- investment 0,5 Mio EUR (co-financing by subsidy from OPE)
- co-financing by owner of the school only up to 36%

GOOD PRACTICE – OPERATIONAL PROGRAMME ENVIRONMENT & EPC

Reconstruction of Secondary School in Prague

→ Savings of energy and water (per year)

→ Heat	1 090 MWh	(61%)
→ Electricity	173 MWh	(55%)
→ Water	1 817 m ³	(44%)

→ Savings of costs (per year)

→ Heat	55 000 €
→ Electricity	17 000 €
→ Water	3 800 €

Total amount 75 800 €/year - around 49% of total costs



GOOD PRACTICE – OPERATIONAL PROGRAMME ENVIRONMENT & EPC

Reconstruction of 31 schools in one of Prague's district

→ reconstruction of technology equipment

by EPC + boiler room operation

- Investment 5,2 Mio EUR (financing from future energy saving operational costs)
- duration of EPC contract – 10 years



→ insulation of building + exchange of windows

- investment 20 Mio EUR (co-financing by subsidy from OPE)
- co-financing by owner of the school only up to 36%



GOOD PRACTICE – OPERATIONAL PROGRAMME OF ENVIROMENT & EPC

Reconstruction of 31 schools in one of Prague´s district

➔ Savings of energy and water (per year)

- ➔ Heat 8 650 MWh
- ➔ Electricity 300 MWh
- ➔ Water 18 700 m³

➔ Savings of costs (per year)

- ➔ **Total amount of savings is around 1 Mio €/year - around 45% of total costs**



Thank you for your attention

Tomáš Chadim

tomas.chadim@svn.cz