

DELIVERABLE T4.1.3

Transnational Energy Efficiency Financing Strategy visualization on the Online Energy Platform - OnePlace

Version
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D.T4.1.3: Strategy visualization on the Online Energy Platform - OnePlace

A.T4.2 Transnational Energy Efficiency Financing Strategy Development

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1. Introduction and aims of the document

Transnational Energy Efficiency Financing Strategy visualization on the Online Energy Platform - OnePlace is a Visual presentation of the transnational strategy module Financing Energy Efficiency of the Online Energy Platform (WPT2). The document fully reflects the Transnational Energy Efficiency Financing Strategy D.T4.1.2 and presents its transnational strategy outcomes online in an interactive way:

Introduction and aims of the document

A transnational strategic document, based on the Comparative analysis of financial schema and Transnational methodological framework for a roadmap development, showing how to look for, find and adopt different financing solutions for EE improvement.

The Transnational strategy for EE financing in CE defines, structures and reviews the existing energy financing solutions and models that are or will be in the future the important enablers for EE and energy savings in public infrastructures. The strategy assesses the potential of different financial models and gives recommendations, also based on BOOSTEE-CE pilot action outcomes.

The strategy will help partners and other stakeholders from partner countries to:

- Identify financing instruments (FI) that have never been used, assess its potential (based on legal framework, available capacities, market potential etc.) and propose measures for their implementation
- Propose improvements in existing financial instruments and models to improve their usage
- Assess opportunities and barriers to deploy financial instruments and models successfully used in other partner countries/regions and propose measures for their uptake

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1. Introduction and aims of the document
2. Key stakeholders and investment barriers in EE financing
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2. Key stakeholders and investment barriers in EE financing

This chapter deals with the identification of the key public and private actors responsible for the Energy Efficiency Financing Strategy, examination of barriers to investment of these actors and the ways to deal with barriers.

The screenshot shows a web browser window with the URL <https://oneplace.fbkc.eu>. The page title is "Key stakeholders and investment barriers in EE financing". The page content includes:

This chapter deals with the identification of the key public and private actors responsible for the Energy Efficiency Financing Strategy, examination of barriers to investment of these actors and the ways to deal with barriers. This will result in the assessment of their knowledge and experience regarding financing models for energy efficiency upgrades in the Chapter 4 - Assessment of the existing financing models and their deployment.

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2. Barriers to investment into energy efficiency and ways to cope with them
 1. Policy barriers

Policy barriers

Specific barriers	Ways to cope with them
Although municipalities develop long term financial plans, the municipal budget system allows effective planning for one year only and makes it complicated to take into consideration financing of perennial projects as sometimes other political targets are more important than energy efficiency and the scarce financial resources are spent on other projects.	A clear commitment of the municipality is helpful to foster energy projects. As an example, Judenburg in Austria has formulated clear targets in the SEAP and is also member of the European Energy Awards programme (e5* in Austria) and the Climate Alliance. *) e5 is corresponding to the EEA (European Energy Award). An interdisciplinary team from different departments, politics, ESCO, energy agency works together on energy, climate and environment topics.
General national policy about energy efficiency is subordinated to the achievement of the EU's EE goals but in some parts it seems sometimes slightly unrealistic if we take into account the level of economic development of the country as well as the level of technological development. EE is priority only to the extent that it meets the EU's objectives. For Poland, for instance, the provisions of the European Union's energy and climate policy oblige Poland to reach massive energy consumption reductions in a short time. The Polish energy policy should therefore concentrate on the sources that are fast to develop in order to cover the need as quickly as possible.	Energy efficiency strategies should become more realistic. It means that all aspects of development that can have an impact on the implementation of energy efficiency measures, especially on the part concerning finance, should be considered and adjusted to the real needs of the end customers

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1. Key stakeholders in energy efficiency financing and their roles
2. Barriers to investment into energy efficiency and ways to cope with them

1. Finance and economy barriers
2. Policy barriers
3. Barriers in awareness and experience on financing energy efficiency
4. Barriers in implementation capacity and procedures



3. Existing funds and assistance in CE countries on national level

This section is targeted directly at the specific support for EE financing by particular countries.

The screenshot displays a web browser window with the URL <https://oneplace.fbke.eu/en/financing-energy-efficiency/financing-energy-efficiency/comparative-analysis-and-best-practices-2/new-page/croatia/funding-leveraged-by-esif-in-croatia/>. The page content includes:

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- Funding leveraged by ESIF in Croatia:**

Through four national programmes, Croatia has been allocated EUR 10.74 billion from ESIF Funds over the period 2014-2020. With a national contribution of EUR 1.9 billion, Croatia has a total budget of EUR 12.67 billion to be invested in various areas, from research and innovation to employment, education and training, social inclusion, public administration and civil society as well as infrastructure and environmental protection.

ESI FUNDS BUDGET FOR CROATIA (2014-2020)

 - EUR 4.32 billion through the ERDF
 - EUR 2.56 billion through the CF
 - EUR 2.03 billion through the EAFRD
 - EUR 1.52 billion through the ESF
 - EUR 253 million through the EMFF
 - EUR 66 million through the YEI

The donut chart shows the following distribution: ERDF (40.2%), CF (18.9%), EAFRD (14.1%), ESF (23.0%), EMFF (2.4%), and YEI (0.6%).

All funds are designed to support Croatia's socio-economic development. The expected results (targets) give an overall view of where Croatia should be on key parameters by 2020.

ESI FUNDS IN CROATIA TARGETS:

 - SOCIAL INCLUSION:** 24 000 people participating in social activation measures including social entrepreneurship.
 - AGRICULTURE AND RURAL DEVELOPMENT:** 3000 holdings to receive investment support; More than 2000 non-agricultural jobs created; 18 000 farms holders to benefit from advisory services; 58 000 hectares of organic farming supported; 40 500 hectares supported to enhance biodiversity, improve water management and prevent soil erosion.
 - EDUCATION:** 48 000 people to receive improved education and lifelong learning.
 - ENTERPRISES:** More than 6500 enterprises to receive support; 480 start-ups supported; More than 7000 new jobs to be created.
 - ENVIRONMENT AND ENERGY:** Improved water supply for 1 million more people; Improved wastewater treatment for 1 million people.



4. Assessment of existing financing models and their deployment

This chapter demonstrates the assessment of each financial instrument / model from the stakeholders' point of view based on the research of all BOOSTEE-CE partners in their countries / regions / municipalities, taking into consideration experience of all stakeholder groups described in detail in the Chapter 2.

Assessment of existing financing models and their deployment

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This chapter deals with assessment of each financial instrument / model from the stakeholders' point of view based on the research of all BOOSTEE-CE partners in their countries / regions / municipalities, taking into consideration experience of all stakeholder groups described in detail in the [Chapter 2.1 of this document](#). Recommendations for further improvements, suggestions for deployment as long as typical activities or projects for each instrument or model come along with each assessment.

How BOOSTEE-CE partners have developed their own EE financing plans and deploy various EE financing instrument is possible to look up in the section [EE financing roadmaps](#) of the [BOOSTEE-CE OnePlace Platform](#).

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Assessment of the Energy Performance Contracting

Features favourable for municipalities	Features NOT favourable for municipalities
<ul style="list-style-type: none"> The contractor provides his know-how, develops, invests and operates the plant. The contractor is involved in the success of the savings, so that higher savings can also be achieved because he has self-interest. The project does not appear in the debt of the municipality, the contracting rate is recorded as an operating expense in the accounts, therefore repayment of obligations related to the investment does not block the creditworthiness of municipality. Not charging the commune with the initial costs of investing in energy saving. Technical and financial risk of investment is transferred to an external company if the contract is well developed. The remuneration of the contractor is paid from the savings generated by the investment. 	<ul style="list-style-type: none"> For small projects, the cost of project development and contract preparation is high and unprofitable. When the market with EPC is not fully developed and there are not many competing and credible companies available the risk of incomplete agreements for municipalities increases. Hardly suitable for small municipalities Complicated terms of a legal contract between partners Choosing only those parts of the investment that will be most economically advantageous to implement
<p>B00 (Build - Operate - Own) specifics</p> <ul style="list-style-type: none"> The municipality is guaranteed an immediate saving relative to its current bill. The ESCO takes on the responsibility for providing the agreed level of energy service for lower costs than the current bill or for providing an improved level of service for the same bill. The more efficiently and cheaply it can do this, the greater its earnings. 	<p>B00 (Build - Operate - Own) specifics</p> <ul style="list-style-type: none"> Deliberate estimation of lower value of savings is a standard practice for the ESCO to secure itself for the guaranteed performance with some buffer. The real questions are how big this buffer is and how the "excess" savings above the estimated ones are split between the client and the ESCO.
<p>B0T (Build - Operate - Transfer) specifics</p> <ul style="list-style-type: none"> Risk transfer from municipality to ESCO firm which bears a substantial part of the risk (political risk, technical risk and financing risk). When the payback period is shorter than the physical lifetime of the project, When the municipality intends to avoid financial risks that might be caused by different factors (exact amount of savings is not calculable due to meteorological or technological reasons, new technologies are integrated, etc.) When the necessary competences and capacities are not available at the municipality to run the investment and related technologies. 	<p>B0T (Build - Operate - Transfer) specifics</p> <ul style="list-style-type: none"> Due to the long-term nature of the arrangement, the fees are usually raised during the contract period. When the necessary competences and capacities of running the investment's technology (e.g. a geothermal plant) are available at the municipality, When the financing can be solved at 100% by other sources (own sources or OP call) and the municipality intends to avoid the risk of cooperating with third party.
<p>B0OT (Build - Own - Operate - Transfer) specifics</p> <ul style="list-style-type: none"> Municipality enters into long term supply contracts with the B0OT operator and is charged accordingly for the service delivered where the service charge includes capital and operating costs recovery and project profit. Same as BOT with the additional feature that the municipality is entitled and intends to forward the ownership of the investment to the contracted concession company. 	<p>B0OT (Build - Own - Operate - Transfer) specifics</p> <ul style="list-style-type: none"> Not favourable for municipalities that don't want to be obliged by contract for a long term. Same as BOT, in addition the municipality does not have the legal possibility or does not intend to forward the ownership to third party. In this way, the municipality finances the investments in its own property, but transfers its management to companies that provide public services.

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Types of EE projects or EE services suitable to be financed this way

- Generally the projects with a high energy cost savings potential





5. Conclusion

This part summarises the common practise in EE financing, suggest possible future developments of EE portfolio in municipalities and brings recommendations to the municipalities as well as to other stakeholders about developing own strategies as well as particular EE projects.

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Possible future developments of municipalities EE portfolio

Complex and larger investment measures also require greater know-how in planning, implementation and financing. During the planning phase, municipalities should look for a suitable specialist planner for planning and support during implementation, i.e. specialised experts for financing from energy agencies or consultants with special expertise who support the municipalities in the development of implementation and financing models and then help to find alternative model of EE financing like ESCO, or contractors, or develop participation models for shared success, as is often the case with PV or wind farms.

... good for manageable measures and costs, however, quality cannot and is not allowed to get into debt further financing from its own strength.

... considered because knowledge and experience are lacking. ... to implement projects as indicated in this last short

... projects can be implemented by a contractor making the financing them, the municipality only pays the contracting rate, which is amortized, after which the energy costs decrease. ... energy-efficient building without having to invest itself, ... ship with a specialised contractor.

... (private companies) establishes an energy supply, which can be, for example, a biomass heating system. ... the plant. A heat supply contract is concluded with the municipality, the municipality only pays for the ... and therefore has full service and no risk. For both **EPC** and **ESCO** you can get more info in the

... to the conventional financing. Municipalities can use successfully implemented examples, especially ... Citizens can participate in the projects in the form of bonds and this way participate in their success.

Particular projects

The first step is to describe the project with a clear objective. Which technologies for the use of renewable energies should be used? Should energy and CO2 be saved? How big should the project be? Should citizens and other stakeholders be involved in the implementation? What should their role be?

According to this target definition, a feasibility analysis should be carried out, including a rough planning of the plant and an estimation of the costs, as well as legal and environmental aspects. For the selection of financing instruments, we recommend to examine the following points:

- Are subsidies that reduce the need for financing available?
- Can and should the amount be financed from own resources or could a loan be taken?
- Is a loan possible or desired, or does it increase the debt ratio (total debt/total assets) too much?
- If variants are sought which do not increase the debt ratio but innovatively outsource the financing, then models such as leasing, contracting or bonds can be considered.
- Is structure of financing balanced and sustainable?
- Could / should citizens be involved in implementation and financing and which way?

It is recommended to outline different options and to assess the opportunities and risks. Experienced experts should be consulted. It is also advisable to look at successfully implemented examples and exchange experiences with those affected. Such an approach makes it possible to single out opportunities and possibilities, decide the direction and continue in developing a model.

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Project website: <https://oneplace.fbk.eu/en/financing-energy>

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