

ClearSupport - IEE-06-189

Clearinghouse Facilitation  
Paving Way for Better Energy Building Performance

# Guideline: Financing EER projects for Financing institutes

## Tool 3



## WP3: Financing Schemes

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## 1 Introduction

This report is a result of the work conducted as a part of work package 3 (WP3) "Financing Schemes" of the project "Clearinghouse Facilitation - Paving the Way for better Energy Building Performance in EU Less Developed Regions". The project acronym is ClearSupport and the project is based on the EC's intentions for establishing a clearinghouse for promotion of small and medium scale sustainability energy projects as stated in the EU Green Paper on Energy Efficiency. The technology focus is on Rational Use of Energy (RUE) in building measures.

WP3 is dedicated to provide financial knowledge and instruments to the Project Service Facilities (PSF). The main focus is on building retrofitting, and to a minor extent designing for RUE in new buildings. A wide range of measures exist for RUE building retrofitting and must be made operational for the operation of the Project Service Facilities (PSF) and thus shall facilitate ClearingHouse penetration in general.

Latvia, Lithuania, Poland, Czech Republic and Crete have PSF in place. On one hand, the role of each PSF is to provide practical assistance to project owners (including housing associations, municipalities and building project developers). On the other hand financial institutes, political stakeholders and institutions/companies related to execution of the work on site are important target groups of PSF-action. To these target groups PSF should provide knowledge and experience about Energy Efficiency Ratio (EER) measures. In discussions with these stakeholders PSF should improve the framework conditions for EER projects.

After the stock taking phase (see D 3.1) and the elaboration of the main components of a financing instrument (see D 3.2) the main object for WP3 is to develop tools for the daily work of PSF regarding discussions with the mentioned stakeholders.

This leads to the following six deliverables:

No:	Deliverable title
<b>D 3.3</b>	<b>Tool 1: Recommendations on financial schemes for the PSF</b>
<b>D 3.4</b>	<b>Tool 2: Clearinghouse processes and procedures</b>
<b>D 3.7</b>	<b>Tool 3: Guide for RUE Building Retrofitting Financing for Bankers</b>
<b>D 3.6</b>	<b>Tool 4: Agreements and contracts</b>
<b>D 3.7</b>	<b>Tool 5: Subsidy guidelines for financing instruments</b>
<b>D 3.8</b>	<b>Tool 6: Tools for the project evaluation</b>

This guideline is elaborated because of experiences with some existing subsidy regulations which show that the effect of allocation of resources is not as effective due to non-optimal subsidy regulations.

## **2 Scope/structure of report**

The scope of this report is to create a guideline for the PSF which guides them through a procedure to acquire financing for project owners and give advice at each step with suitable instruments. The report is structured in a description of an EER financing instrument and comes with a list of possible measures and some suitable combinations of those.

## **Guideline**

### **2.1 General description of EER projects**

The aim of the EER projects is to increase the local economy by generate regional investments for energetic refurbishment of buildings. In addition to that it will be provide new jobs. Furthermore there is a possibility to decrease energy costs and CO<sub>2</sub> emissions by apply the EER measures.

To achieve these aims there is a need of incentives for energetic refurbishment. One incentive can be the offer of loans including privilege conditions. The privileges can be low interest rates, offering a benefit for the repayment or the possibility to repay periods after starting the project. These privileges should be linked to the character and the amount of the refurbishment measures.

The challenge by implementing such model is often a lackage of technical know how with the bankers to judge about the projects of the credit user. Therefore there is a need of experts (e.g. engineers or architects) who make calculations and prepare the needed verifications understandable for the banker's.

### **2.2 Technical solutions**

To achieve an optimal outcome, especially saving as much energy as possible, it is necessary to invest more money as it is needed for standard refurbishment. Higher investments in these measures are usually profitable because the savings of energy costs amortize its investment.

To motivate clients to achieve these aims by taking loans there have to be a benefit which is connected to the character and the amount of the measures. The more the efficiency, the more the amount of benefit.

There have to be fixed criteria which allows to estimate about the refurbishment measures by the builder and the banker. These kinds of criteria must become standards which have to be fulfilled or get ahead.

Such standards are needed to evaluate projects before starting. One aim of the refurbishment should be bringing up the building on the energetic level of a new building by the planned measures. That means the consumption characteristic should be on the same level as a state of the art new built building. Another aim is an improvement of the characteristics 30% under the level of these new buildings.

Alternatively there should be a catalogue of measures given which have to be executed in case of a refurbishment. Some useful measures are listed in the annex.

### **2.3 Costs, savings and earnings**

Energy saving measures usually are more expensive than standard measures, because more material is used or the used material is much more expensive. In addition, the installation is much more complex because of the higher requirements (such as air tightness, exactly connections, close isolation etc.).

It is important to procure the benefits of spending more money to the builder which he normally couldn't finance.

A good argument for the higher capital expenditure is the increasing savings that refinance the payments. A measure is profitable if the higher payment is repaid within its technical lifecycle. A favourable financing, that means lower costs, would reduce the period of repayment.

The measures of isolating the building envelope and technical building equipment are useful for comfort and living climate. Isolating the buildings envelope causes the heat staying in the house in winter and the cold in summer and not losing it through the walls, windows, basement ceiling and roof area. By fit the building

equipment it is possibly to provide only the necessary energy and provide it only at the place where it is required. Energy losses are already eliminated within the production.

In addition there will be an increasing property value by fulfil the EER according to the regulations.

#### **2.4 Existing risks and how to handle them**

Usually there are risks in the credit business. The main parts of these risks are taken by the credit user. Building measures in existing property caused often an overspend of planed costs, because cost-influencing factors could only be investigated during the refurbishment. In either case the credit user should provide financial reserves.

One further risk is not to achieve the rate of energy/cost savings. In this case the reason has to be investigated. It is possible that the planner has failed. For this case it have to be discussed whether the planner is judged for the financial deficit. If the users caused the problem, there have to be a change in way of living or a change in the setting of the building equipment. If there is a failure in building of these ambitious constructions, the project owner will subrogated to the construction company. Therefore it is necessary to charge well-known companies for these measures.

Another risk which is beared by the bank and the credit user is the financial failure of the credit owner. Because of incidents like illness and unemployment there could be a loss of basis for repay the credit. To hedge both parties in case of such incident the credit owner has to grant usual securities to the bank.

#### **2.5 Partners for project evaluation**

To take notice of the conditions and possibilities given by the EER, there should be provided places where the building owner can inform himself. This could be center of

consultation for building owner or consumer associations. Building companies, engineers and architects should be able to give such information.

Moreover they have to know the specifications of planning and construction and its realisation. The planner have to be advised to make the necessary calculations and verifications before making an application for the banker.

The executing companies have to have experiences in handling the EER and the used materials and constructions. So it ist possible to avoid the risk of failure in contstruction and energy savings.

The place to go for apply an EER-credit is the local bank. It is the best to give information and trustful advice to the credit owner. They know best about the financial status of their clients and can give convenient information of appropriate financing model.

### 3 Annex

#### 3.1 Description of measures

Proposed list of packages of measures

	<b>Measures</b>	<b>Description/Examples</b>
<b>Package of measures 1</b>	Insulation of exterior walls	e.g. insulated curtain wall, inside insulation of exterior walls, insulation of air film
	Insulation of attic and/or roof	Insulation between, below or on rafters or on the attic floor
	Insulation of ceiling to unheated cellar, walls and flooring of heated rooms against soil as well as walls between heated and unheated rooms	e.g. by installation of polystyrene sheets
	Window renovation	Sealing or renewing of plain glass or of the whole windows
<b>Package of measures 2</b>	Heater renovation	Reworking components of or renewing the whole heating system
	Insulation of Attic and/or roof	Insulation between, below or on rafters or on the attic floor
	Insulation of external walls	e.g. insulated curtain wall, inside insulation of exterior walls, insulation of air film
<b>Package of measures 3</b>	Heater renovation	Reworking or renewing of heating system
	Insulation of Attic and/or roof	Insulation between, below or on rafters or on the attic floor
	Insulation of ceiling to unheated cellar, walls and flooring of heated rooms against soil as well as walls between heated and unheated rooms	e.g. by installation of polystyrene sheets
	Window renovation	Sealing or renewing of plain glass or of the whole windows

<b>Package of measures 4</b>	Heater renovation	Reworking or renewing of heating system
	Window renovation	Sealing or renewing of plain glass or of the whole windows
	Insulation of external walls	e.g. insulated curtain wall, inside insulation of exterior walls, insulation of air film
<b>Package of measures 5</b>	Insulation of external walls	e.g. insulated curtain wall, inside insulation of exterior walls, insulation of air film
	Insulation of Attic and/or roof	Insulation between, below or on rafters or on the attic floor
	Insulation of ceiling to unheated cellar, walls and flooring of heated rooms against soil as well as walls between heated and unheated rooms	e.g. by installation of polystyrene sheets
	Window renovation	Sealing or renewing of plain glass or of the whole windows
	Heater renovation	Reworking or renewing of heating system
	Installation of ventilation system	Automatized control and heat recovery

### **3.2 Hand out**

EER are renovation projects that achieve energy efficiency additionally to the aims of restoration and maintenance. Normally those targets are more expensive than standard renovations.

A big challenge in the process of generating EERs is to create incentives for the building owner to invest more money for more efficient building design than he would spend for standard renovations. To achieve this aim the financing conditions for the client should become better, the more efficient the building project is.

For the banker who is supposed to fund the EER it is not possible to give a professional opinion on the energy efficiency of a Building in the planning stadium to fix the financing conditions. For that there is a need for standards whereby EER can be assessed by the Banker, the Planner and the building owner.

Those standards should be defined so that a stated efficiency of a new building can be achieved. To calculate the energy requirement of the immovable a skilled engineer is necessary.

Alternativly to the view to the whole building there should be a catalogue with a number of measures. Those measures should be combined to useful compositions by which satisfiable results can be reached. A list of possible measure combinations should be given.

The first priority is to demonstrate that an EER with its energy savings and the convenient financing conditions is more profitable than a standard renovation.