

## D6.4: Report on proposed measures for new financing schemes

RenoHUb H2020 project

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## PROJECT PARTNERS

AACM: AACM Central Europe Llc

ENERGIAKLUB: Energiaklub Climate Policy Institute and Applied Communications Association

IMRO: IMRO-DDKK Non-profit Ltd

MCSTE: Hungarian Family House Owner Organisation

MEHI: Hungarian Energy Efficiency Institute

### 1. Objectives of the RenoHUb project

Overall objective of RenoHUb is to trigger a significant upscale of the energy retrofits in the Hungarian residential building sector. The project is based on the assumption, that the rate of the energy renovation of homes can be significantly increased by eliminating the non-financial barriers of the refurbishment process, more specifically by providing appropriate technical support to the homeowners along the renovation journey. The key outcome of RenoHUb is the implementation of a Renovation Hub (RenoHUb) model that is based on a "one-stop shop" (OSS) concept. The OSS concept is widely adopted in Europe and it is proved to be an effective instrument to accelerate home retrofits. Currently, nearly sixty OSSs operate in various European countries successfully.

RenoHUb OSS service consists of an Online Platform and a network of information offices (called RenoPont offices). The working hypothesis of RenoHUb at the project design phase was that whilst the users of an online tool would rather be the younger generation and mostly people with higher level of education who routinely use IT-based applications, the information hotspots would support the older generations and computer literate target groups. By its completion, RenoHUb services are able to seamlessly cover the entire spectrum of energy renovation process for both multi-apartment buildings and single-family homes.

The RenoHUb project also intends to give support for the final beneficiaries in accessing finance for home renovation and support the local financial institutions in developing green financial products in the retail banking sector; and thereby to green their residential portfolio at the same time. Therefore, a separate Work Package dedicated to promote green finance by local financial institutions.

The ultimate goal of the project is to develop an economically viable business model, that will be capable to run without the need for public subsidies

The launch of RenoHUb was based on the diagnosis that the energy demand of the residential sector accounts for more than one-third of the final energy consumption in Hungary. The domestic residential building stock has an immense potential for energy savings. Based on recent local estimates, approximately two-thirds of the 4.4 million homes in Hungary are energetically outdated, and with appropriate energy renovation approximately 40 to 50 percent of the final energy currently used could be overall saved. According to estimations by experts, approximately 80-100 thousand homes would need to be refurbished each year in order to prevent further ageing of the building stock, whilst the actual yearly renovation rate is far below.

The latest Hungary Country Strategy (2021-2026) prepared by the European Bank for Reconstruction and Development (EBRD) presents a more conservative estimation. It states that Hungary has one of the most energy-intensive residential sectors in EBRD's region of operation. According to the Strategy, nearly 80% of Hungarian homes do not meet modern technical and thermal requirements. A breakthrough in the energy modernization of residential buildings can significantly contribute to the fulfilment of national and European climate and energy policy targets, especially with regard to the reduction of greenhouse gas emissions and the reduction of the high dependence on fossil energy import.

The key stakeholder groups of RenoHUb include:

- Homeowners in both the single-family house and multi-family building segments;
- Authorised representatives of multi-family buildings (i.e., of housing cooperatives and condominiums) and their associations;
- Consultants or experts in particular in energy assessment of buildings and technical and financial design of energy retrofit measures as well as in work supervision;
- Construction contractors and installers;
- Technology producers and traders;
- Financiers including the Central Bank of Hungary, the Hungarian Development Bank, the Hungarian Banking Association, local commercial banks, saving banks, credit guarantee institutions, ESCO companies and the international financial institutions;
- Energy utilities and their subsidiaries responsible for the implementation of the Energy Efficiency Obligation Scheme;

- Central government services such as the Ministry of Finance,
- Local and regional authorities and their executive bodies;
- Representatives of the NGO sector: the Hungarian Chamber of Engineers, the Hungarian Green Building Council, local economic chambers, energy clusters, policy think-tanks and European organisations such the Covenant of Mayors, the Climate Alliance, EuroAce, etc.;
- Traditional and social media actors; and
- last but not least the European Climate, Infrastructure and Environment Executive Agency (CINEA).

# 2. Presentation of WP6 "Development of financing schemes"

The overall objective of WP6 is to establish partnerships with the local financial institutions in order to support them to develop simplified, optimally-tailored and accountable green financial products for home retrofits. This process is favourably supported by the global trends that trigger financial institutions to green their lending or investment portfolio by better adherence to the environmental, social and governance (ESG) criteria as well as ensuring more cohesive alignment with the EU taxonomy for sustainable activities.

This partnerships with financial institutions assume the establishment and maintaining a substantive dialogue between the project team and financial institutions in the area of promoting residential retrofits covering both the single and multi-family building segments.

The outcome of WP6 is a variety of identified green financing scheme that could be further developed to integrated green financial products that are able to

- foster residential energy efficiency investments at a macroeconomic scale;
- encourage synergies between financial institutions and integration of public and private financial resources; and
- create a sustainable ecosystem for energy retrofits in the residential sector.

WP6 builds in particular on

- strategic evaluation of the existing financial schemes, interviews and consultations with selected representatives of international and local financial institutions and other financiers competed within the framework of the current project in particular under Tasks 2.4, and 6.1 through 6.3;
- permanent monitoring of the preparatory and adoption process of the Hungarian Multiannual Programming Framework (2021-2027) and the Resilience and Recovery Plan as well as the national programming activities including synergies with international financial institutions;
- local grant and loan finance schemes dedicated to home renovation (not necessary applying metrics related the energy efficiency improvement as funding criteria);
- dedicated activities by the Central Bank of Hungary to promote the sustainability practices in the local financial sector;
- prospective and launched financing schemes by the local banking sector; and
- international best practices that can potentially be adopted by specific local financiers.

The conclusions drawn and results achieved by the specific tasks completed under RenoHUb on which the present Deliverable is based are briefly summarized in the below sections (2.1 through 2.4).

## 2.1 Task 2.4: Strategic evaluation of the existing financial schemes available on the market

The corresponding deliverable providing a strategic review of the financial schemes dedicated to home retrofit that were in place in the initial phase of the project implementation, reported that the Central Bank of Hungary (MNB) volunteered a pioneering role to promote sustainability considerations in the local financial sector. In December 2019, the MNB announced the introduction of the Green Preferential Capital Requirement Programme, for credit institutions to support the growth of green financial products and to improve the energy efficiency of the Hungarian building stock.

The report also evaluated the Residential Energy Efficiency Loan Programme which was the only available green product targeting the residential sector. The Hungarian Development Bank (MFB) operated a Residential Energy Efficiency Loan Programme, a loan programme with a preferential 0% fixed rate loan for financing a set of energy efficiency and renewable measures in the residential sector. The programme was resourced by the Hungarian government using funds committed under the Multiannual Programming Framework (MFF) 2014-2020, and was offered to the beneficiaries via commercial banks. The programme expired in 2020, and it is understood the government intends to relaunch the scheme as soon the resources under the new MFF (2017-2027) and Recovery Plan will become available.

## 2.2 Task 6.1: Exploration of strategy and information needs of the financial institutions

The confidential report aimed at in-depth interviews and consultation with financial institutions concerned by the greening of the local residential sector in Hungary. The following key disclosable results are summarised below:

- Close cooperation with the Hungarian Bank Association has been established. The Association assists the RenoHUb team in reaching-out to financial institutions, and provides a regular forum for the presentation of the project's results and for the exchange of opinions within the framework of the Sustainability Working Group and Energy Expert Group events.
- A very productive series of consultations has been completed with the pertinent representatives of the Hungarian Central Bank (MNB), in the area of learning about the Bank's sustainability activities. MNB based on a special mandate, plays a pioneering role in promoting sustainability in the local financial sector.
- A permanent consultation has been initiated and maintained with the European Investment Bank (EIB), primarily in the field of energy renovation of condominiums/housing cooperatives within the framework of ELENA Programme and the EIB's other consulting activities.
- Through consultations with the European Bank for Reconstruction and Development (EBRD), the Bank's Strategy for Hungary for the period 2021-26, and the recommended measures to promote the energy modernization of domestic public and residential buildings have been explored. In

addition, the Bank's activities under the Green Economy Finance Facility (GEFF) initiative were studied in detail.

 Building relationships with nearly 15 commercial banks and another financial institution has been achieved.

#### 2.3 Task 6.2: Training of the team members of financial institutions

The Task aimed to help the staff of the financial institutions better understand the technical content and the financial risks associated with energy efficiency projects as well as the exploration of cooperation opportunities offered by the "one-stop shop" concept and approach of RenoHUb. To achieve this goal recurrent "sensitising" presentations and information sessions have been organised for the financial institution. The relevant deliverable describes these training activities and annexes the training materials developed in the course of the implementation of RenoHUb.

## 2.4 Task 6.3: Assessment of the integration of existing financial instruments

Deliverable of Task 6.3 addresses adoptable financing schemes identified during the implementation of the RenoHUb project. These include:

- loan/grant schemes;
- the EIB ELENA programme;
- on-bill finance;
- green mortgage; and
- façade leasing.

A summary for each topic has been developed for local financial institutions.

## 3. Presentation of Task 6.4 "Proposals for development of new financial products"

Task 6.4 had been originally foreseen to develop proposals for new integrated and synergetic financial products. However, under the circumstances described in Section 4, the project team focused on reinforcing the information exchange with the financial institutions identified previously.

## 4. Project ecosystem: challenges and barriers

The strategic framework of the project is depicted by the following key processes and factors.

- At the launch of the project a known challenge was as a side effect of subsidised energy prices resulting in low motivation towards home energy retrofits due to the long repayment periods. It was also clear from the beginning that the deep renovation of residential buildings at a large scale is beyond the financial capacity of the homeowners; therefore, the making available public grants for the specific purpose is unavoidable.
- As mentioned above, a sole loan facility of the Hungarian Development Bank explicitly financing energy refurbishment of residential buildings was available at the market, and this facility was resourced by MFF 2014-2020. Commercial banks did not launch initiatives dedicated to the improvement of the energy performance of residential buildings.
- The adoption of the European Green Deal and Fit for 55 Package have put the governments under pressure to make significant steps towards the timely achievement of their climate targets. The legislative package and policy tools under the European Green Deal gave also a strong impetus for financial institutions to green their investment and loan portfolio.
- The project implementation period has been accompanied by the permanent presence targeted grant schemes for home retrofit made available by the government which competed with banking products. However, a common feature of this grant and loan products was that they were not linked to energy saving/carbon reduction metrics or criteria.
- Grant support provided through the Hungarian Multiannual Programming Framework (2021-2027) and the Resilience and Recovery Plan play an eminent role in the government's programming for energy-related investment measures. The delays in accessing these funds have a

fundamental adverse impact on the progress in this specific area. These funds have only been partially released by the European Commission due to the ongoing process concerning rule of law mechanism.

- The implementation of the project was seriously hampered by safety risks and the countermeasures of the coronavirus pandemic. Due to the lockdown between March 2020 and June 2021, all project communication had to be moved online, which had several adverse impacts on the project implementation, and on building new relationships in the banking sector, in particular.
- The availability of public grants dedicated to home retrofits and the reduction VAT to 5% for the construction of new energy efficient homes have had an unfavourable impact on the construction material and service market. A shortage of the construction service supply was created and both the construction materials and construction/installation prices have substantially increased.
- As of February 2022, the impact of the conflict in Ukraine on energy prices and their spill-over effect to the local economy and the financial sector hit the homeowners in parallel by the rise of energy prices and enhanced investment and borrowing costs.

## 5. Proposed general cooperation framework with local commercial and saving banks as well as with other financiers

The RenoHUb elaborated a cooperation framework with financial partners, commercial and saving banks, credit guarantee institutions, ESCO companies, investment funds etc., in order to be able to promote the increase in the proportion of residential green investments even after the life cycle of the RenoHUb project.

The proposed framework includes cooperation at institution and customer levels.

Institutional level: direct support options of the Bank or institution may include:

- Evaluation of the retail lending portfolio from a sustainability perspective.
- Training of bank employees (responsible e.g., for product development, risk assessment, customer relations, communication).
- Joint project development (e.g., ELENA project)
- Standardised risk assessment criteria (e.g., LEME: List of eligible equipment and materials).
- Development of green financial product(s).

<u>Customer level</u>: direct advice to banks' clients. The goal is to establish institutional cooperation between the RenoHUb one-stop shop (RenoPont) network and the interested commercial, saving or development banks.

Figure 1 illustrates the framework of the proposed cooperation with local financial institutions.



Figure 1: Proposed framework for cooperation with financial institutions

A cooperation agreement was signed with a confidential ESCO partner in June 2022 and signing similar agreements with other financial partners are being negotiated at this stage.

### 6. Innovative financing schemes to be further promoted

Deliverable 6.3. has identified and described the financial solutions that are considered worth further discussing with the stakeholders of the local financial sector about their potential adaptability in Hungary.

Chapter 6. aims to provide a brief summary of these financial facilities and report about the practical steps made to promote them amongst specific financiers. All these financial schemes were presented to the members of the Sustainability and Energy & Leasing Working Groups of the Hungarian Banking Association on 27 April, 2023.

### 6.1 Loan-grant schemes developed by International Financial Institutions

This section briefly presents two examples for the cooperation of two international financial institutions, the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) with the European Commission and local partner banks in the field of sustainable energy (energy efficiency and renewable energies).

#### EBRD - GEFF

The EBRD's Green Economy Financing Facility (GEFF) supports businesses and homeowners who wish to invest in green (energy efficiency and renewable energy) investments. The GEFF, launched in 2014, currently operates through more than 140 local financial institutions in 26 countries. It enabled to disburse more than EUR 6 billion in EBRD loans. GEFF's activities are typically supported by donor organisations. The grant support by donors is partially used as investment support for the final beneficiaries and partly to finance complementary technical expertise.

#### EU/EIB Green Initiative (GI) Facility

The EIB launched its Green Initiative Facility (GI: Green Initiative Facility) in 2012 in four new EU member states. The complementary grant was resourced from the

budget of the European Union. In Hungary, the EIB GI combined loan/grant scheme was largely used for the energy renovation of multi-apartment buildings with high energy saving potential.

The Figure 2 below shows the organisational structure of the identified combined loan and support schemes.



Figure 2: Presentation of combined loan/grant schemes

The main advantages of combined loan and support schemes:

- simple and transparent system and easily computable technical and financial processes;
- straightforward rules to reward final beneficiaries' energy efficiency investments depending on the complexity of energy savings and/or energy development;
- verification of energy savings and reduction of greenhouse gas emissions by dedicated experts;
- integrating the tasks of the green transition into the bank's planning process through close cooperation with them.

### 6.2 ELENA programme (multi-apartment buildings)

It is widely known that almost one in five homes in Hungary's total housing stock is a flat in a multi-apartment building. Nearly one third of the 770-780 thousand of such apartments are located in Budapest, the rest are mainly present in larger cities, typically in county capitals. The number of homes in buildings made of prefabricated reinforced concrete panels is near to a half a million. It is estimated that nearly 300,000 flats in multi-apartment buildings have already undergone partial or deep energy efficiency retrofits to date.

The justification for using ELENA funds for the renovation of multi-apartment building is:

- large untapped energy renovation market in the multi-apartment building segment;
- high energy savings and greenhouse gas emission reduction potential;
- the common concern of the homeowners is the reduction of the energy cost;
- the energy renovation process is a highly standardised process;
- individual projects can be merged into larger portfolios;
- the energy saving measures can be combined with renewable energy production, which can further improve the building's energy balance;
- installation of smart building management solutions can further reduce energy consumption.

## 6.2.1 Ambitions of local governments in promoting residential energy retrofits

Although local governments are the prime beneficiaries of the ELENA, a combined loan and grant instrument funded jointly by the European Investment Bank and European Commission, extensive consultations with a large number of dominant local governments (typically capital district and major city municipalities) resulted in the conclusion that Municipalities feel limited responsibility for the energy renovation of the residential building stock in their respective administrative area.

As for the promotion of the energy retrofit in the single-family segment, municipalities' ambition, if any, is largely limited to awareness raising. Notwithstanding that municipalities do demonstrate more interest in the multi-apartment building segment, the risks associated with becoming a beneficiary of ELENA from the perspective of one single municipality are regarded as still too high.

The main reasons municipalities are reluctant the engage with ELENA to support home retrofit, include:

- even in municipalities with large energy inefficient building stock, the availability of realistically mobilizable energy retrofit portfolio remains well below the critical investment volume of EUR 30 million targeted by ELENA;
- the 10% own contribution to the technical assistance component is not necessarily available for each municipality for the specific purpose;
- the ultimate liability for the realisation of physical investments by third parties is beyond the reasonable risk taken normally by municipalities;
- municipalities generally lack the institutional and human capacity to conceive and implement an ELENA project.

Thus, local governments refrain from applying for ELENA funding, and apparently prefer an external partner that is ready to undertake as the main focal point for a potential ELANA action. Nevertheless, calling on their knowledge of their specific residential building stock, Municipalities are ready to facilitate the efficient selection of the beneficiary buildings, and support the other phases of the project implementation.

Moreover, several municipalities approached by RenoHUb stated that they would be ready to financially contribute to the investment costs of the building retrofit.

#### 6.2.2 Customer journey

The RenoHUb programme has explored and analysed the entire renovation process ("customer journey") and intervention points in both the single-family and multi-family segments, as well as the possibility of developing standard

processes to make the renovation process as efficient and transparent as possible (Task 2.2).

The most crucial element of the renovation journey of multi-family building is the initial collective decision-making by the homeowners. This typically include:

- decision on retaining energy expert to prepare a renovation plan including a baseline assessment, proposal for technical measures and associated cost estimate;
- decision on commissioning the construction/installation works with prior agreement on financing the investment.

The major bottleneck from a decision-making perspective is that decisions on spending funds from the joint budget of the housing community for investment requires in most cases a quorum of the homeowners.

Nevertheless, the partner municipalities RenoHUb staff talked to, are strongly committed to support the identification of those buildings where the owners' consensus concerning the energy retrofit has been reached or can be realistically expected.

To a first approximation, the implementation (construction/installation) is outside the competence of the PDC. The selection of construction/installation contractors remains entirely the decision of the owner community of a given building.

#### 6.2.3 Delivery mechanism

Based on the consultations the ideal beneficiary of the ELENA programme is an independent Project Development Company (PDC). PDC is an appropriately designed special purpose vehicle which provides energy/engineering services and financial advice along the "one-stop shop" concept for upgrading energy inefficient multi-apartment buildings in partnership with the local municipalities. The anticipated project structure is shown by Figure 3.



Figure 3: Conceptual scheme of the proposed ELENA multi-apartment building system

Local governments are not expected to financially contribute to the activities of the PDC, only facilitate the efficient selection of the beneficiary buildings, and support the other phases of the project implementation. As discussed, the appropriate selection of the beneficiary buildings is the most crucial element of the process. The partner municipalities are expected to strongly support the identification of those buildings where the owners' consensus concerning the energy retrofit has been reached or can be realistically expected.

Partner municipalities are engaged via Bilateral Cooperation agreements. The anticipated cooperation agreements regulate the

- 1. organisation and technical supports support by municipalities;
- technical cooperation with specific municipal companies (typically public companies in charge of local town management or urban development); and
- 3. potential financial contribution to the energy retrofit investments.

#### 6.2.4 Planned activities to be funded by ELENA

The planned consultancy services regarded to be eligible for funding from the ELENA programme in support of multi-apartment building renovations include in particular:

- General
  - development of project pipeline in partnership with participating municipalities;
  - project management and administration;
  - carrying out the expected communication and dissemination tasks;
  - developing financial models:
    - self-implemented renovation;
    - ✤ ESCO funding.
- Support to individual multi-apartment buildings
  - facilitating homeowners of multi-apartment buildings in decisionmaking [participation in homeowners' meetings, supporting the decision-making process (moderation of meetings, preparation of decision-making documents, etc.)];
  - establishing the technical parameters of the materials to be used, benchmarks, possibly targeted cooperation with specific manufacturers;
  - energy surveys/audits to determine energy baseline and planned final state;
  - developing renovation plans [possibly more development scenarios with technical content versus funding needs];
  - financial plan [loan and if available, grant by the participating municipalities];
  - pre-qualification of contractors;
  - support for contractor bidding process [ technical specification, structured and transparent request for offers, evaluation criteria etc.];
  - support to contracting [ e.g., adherence to the technical specification, financial guarantees, warranty, contract template for specific beneficiaries];
  - technical supervision of contractors;

- assisting in the assessment of warranty claims;
- where possible, a follow-up monitoring and evaluation.

The above activities will be streamlined via the following three service models:

- upgrading of passive elements (thermal insulation of walls, roofs, pipes and heat centres etc., and replacement of windows and doors);
- installation of solar renewable with power grid connection; and
- installation of solar renewable, energy storage and building energy management system ensuring balanced grid supply.

#### 6.3 Energy efficiency mortgage (EEM)

The purpose of an energy efficient mortgage (EEM) is to encourage borrowers to improve the energy efficiency of their buildings and/or purchase high energy efficient properties. The incentives for borrowers are favourable mortgage financing conditions and/or a higher initial loan amount to finance the energy modernization of the property. Both solutions are intended to reflect the real risk profile of energy efficiency mortgages.

The cost of operating green buildings is lower due to the reduction in utility expenses, which means that the borrower is in a better financial position to repay the loan and thus, the probability of default is reduced. Green buildings represent increased value compared to identical properties without a building energy certificate, or are more resistant to "brown discounts" in markets where "less green" properties are becoming more attractive.

EEM solution will be further pursued with the Central Bank of Hungary and selected commercial banks.

#### 6.4 On-bill finance

On-bill finance is a promising form for energy providers to invest in green investments (e.g., thermal insulation, modernization of heating systems) that improve the energy efficiency of their residential and corporate customers' properties. Figure 3 shows the stakeholders' relations of the on-bill financing. Globally, these developments reduce customers' energy costs, increase the value of real estate, create jobs, reduce environmental impact and exposure to imported energy sources.



#### Figure 3: Structure of on-bill finance

The essence of invoice-based financing is that the costs of clean energy investments are financed by the energy utilities for customers, which are then repaid by the customers concerned in the utility bill. Repayment on a utility bill is a simple process, as energy utilities already have a billing relationship with their customers and have access to information about their energy usage patterns and payment history.

At the same time, invoice-based financing reduces the risk profile of loans because the borrower is encouraged to repay the loan in order to maintain the energy service. In addition, after the energy renovation, the cost of operating the building will be lower due to the reduction in energy expenditure, which results in the borrower being in a more favourable financial position to repay the loan, and at the same time, the likelihood of default is reduced.

The resourcing of the energy provider is typically provided by a third-party financier, which is able to provide loans with more favourable conditions than directly to residential and corporate loans, since the financier runs the energy provider's (lower) financing risk. The financing cost of the loan to be taken out by the utility provider can be further reduced by making financial institutions more competitive.

The Hungarian Energy Efficiency Institute is closely monitoring the implementation of the Energy Efficiency Obligation Scheme which is strongly related to on-bill finance solutions. The on-bill finance concept has been addressed with local electricity providers. The latest discussion with the representative of the Hungarian Electricity Works was held within the framework of the financial roundtable of the closing event of RenoHUb on 4 May 2023.

#### 6.5 Façade leasing

Façade leasing is a pilot project by the Delft University of Technology, that aims to improve the energy performance of buildings and reduce the environmental impact of buildings by transferring the facade of the owner's building to an energy developer and leasing the equipment installed by the developer.



#### Figure 4 Organisational structure of façade leasing

In the façade leasing project, the Delft University of Technology researched the applicability of a model in which the product i.e. the equipment attached to the façade is made available to the owner by a third party under a lease scheme. Due to the possibility of reusing the equipment and materials attached to the façade, the supplier contributing to the design of the façade is interested in preserving the value and quality of the installed products for as long as possible.

According to the working hypothesis of the University, such a leasing scheme results in a better product that performs more efficiently during its life cycle and does all this at a price comparable to the costs of purchase and maintenance. By transferring the task of managing and modernizing technological systems to the partners responsible for their development, a faster market introduction of new and more efficient systems can be achieved, while the initial investment burden of developers and building owners can be reduced. The organisation of façade leasing is illustrated by Figure 4. Implementation modalities have been discussed with local universities as potential hosts and ESCO companies as financiers.