

# **Innovative Financial Instruments for industry low carbon energy transition in Central Europe**

D.T2.4.6 Finalisation of the Innovative Financial Instrument in Hungary

**External expertise supporting the finalization of the ex-ante assessment analysis and the feasibility study**

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## Executive summary

Ex Ante Consulting Ltd. was commissioned by the South Transdanubian Regional Innovation Agency to elaborate an Impact Assessment within FIRECE Interreg Central Europe project no. CE1131. The purpose of the Impact Assessment is to define and describe an innovative financial instrument, and to carry out a feasibility study, after assessing and evaluating the financing structures (loans, grants, etc.) available for SMEs in Hungary to support energy efficiency investments.

Before commencing an assessment of the theoretical rationale for financial instruments it is important to specify exactly what is actually meant by a financial instrument. To date the term has been open to a degree of interpretative flexibility as is often the case with industrial policies more generally (Pack and Saggi, 2006). Indeed, rather than a strictly technical definition for a particular policy mechanism, the term financial instrument has become a rather vague “umbrella term” for a range of different financial programmes primarily aimed to help alleviate a disparate range of funding difficulties within SMEs. This probably reflects the fact that financial instruments are often driven by the pragmatic consideration to diversify the range of policy instruments within Cohesion Policy programmes rather than any in-depth consideration of the design of financial instruments (Wishlade et al., 2016).

In light of any definitive unpacking of the term, we shall offer the following definition:

Financial instruments are public policy instruments such as subsidised loans, credit guarantees and equity finance schemes designed to overcome market failures experienced by small and medium-sized enterprises to promote productive investments in a way that would not result through market interactions alone.

We have examined the available domestic and international examples and concluded that the most effective way of financing energy efficiency investments is to provide preferential credit. We found the involvement of SMEs, the selection of eligible companies for proposals and the reliability of the energy audits carried out by the companies to be significant problems. We believe that providing financial and energy auditing as a professional service (indirect support) could be the optimal solution for selecting the adequate companies.

The proposed financial instrument aims at supporting investments of SMEs for energy efficiency and advanced energy technology adaption purposes. The main goal is to reach optimal operation with the lowest energy consumption possible, and maximalise the energy efficiency of buildings and facilities.



For an efficient operation, the FI will be composed of two components. Component 'A' includes a thorough due diligence for approximately 300 businesses, ensuring nation-wide coverage by an independent expert consortium. This activity will result in a detailed Energy Innovation Roadmap at each SME, including financial background and possibilities, and the feasibility study of the energy efficiency investment. Businesses examined will have the opportunity to apply for subsidized loans to implement the developments within the framework of Component 'B'. Both components will be initially financed from the Operational Programme budget (with a possibility to attract private investment in the long run), through an Energy Fund established by the Ministry of Finance. For scheduling purposes and seamless operation, component 'B' will be constantly open until funds run out, 6 months after component 'A' is launched.





## 1 Financial instruments: Overview

### 1.1 Rationale for the use of financial instruments and experience in the 2007-2013 programming period

#### 1.1.1 Legislative Framework<sup>1</sup>

Financial Instruments (FIs) were provided for under Article 44 of the 2006 Structural Funds Regulation<sup>2</sup> – the General Regulation – with some provisions in the so-called Implementing Regulation<sup>3</sup>. However, these original legislative provisions were both brief and general, and they gave little guidance on issues specific to FIs, as opposed to non-repayable support. As a result, the General and Implementing Regulations (hereafter ‘Structural Funds Regulations’) were supplemented both by amending Regulations and by four sets of COCOF ‘guidance notes’ issued under the auspices of the Coordination Committee of the Funds.

The General Regulation indicated that OP contributions could be used for financial products such as loans, guarantees and equity in certain policy areas. More specifically, Article 44 (as amended) envisaged that:

“As part of an operational programme, the Structural Funds may finance expenditure in respect of an operation comprising contributions to support any of the following:

- a) financial engineering instruments for enterprises, primarily small and medium-sized ones, such as venture capital funds, guarantee funds and loan funds;<sup>4</sup>
- b) urban development funds, that is, funds investing in public-private partnerships and other projects included in an integrated plan for sustainable urban development;<sup>5</sup>
- c) funds or other incentive schemes providing loans, guarantees for repayable investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing.”

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<sup>1</sup> This chapter is based on Wislade et al., 2016

<sup>2</sup> Council Regulation (EC) No 1083/2006 of 11 July 2006

<sup>3</sup> Commission Regulation (EC) No 1828/2006 of 8 December 2006

<sup>4</sup> These were sometimes referred to as JEREMIE, typically, but not systematically, when the European Investment Fund was involved in their design or implementation.

<sup>5</sup> These were usually referred to as JESSICA funds.



### 1.1.2 Financial Instruments in the 2007-2013 programming period<sup>6</sup>

Economic Development Operational Programme (EDOP) Priority 4 and Central Hungary Operational Programme (CHOP) Priority 1.3 identifies the introduction of financial instruments co-financed by EU funds to improve SMEs' external access to finance and address "financial market failures".

However, there are a number of preferential financing instruments available on the market with similar State aid objectives. The most important subsidized loan is Funding for Growth Scheme (FGS) launched by the Hungarian National Bank (HNB) in April 2013. The first two pillars of the three-pillar Scheme aimed to support small and medium-sized enterprises in accessing forint denominated loans and to strengthen financial stability. In the Monetary Council's judgement, the access of companies operating in Hungary to credit has significantly tightened since the emergence of the financial and economic crisis, particularly that of small and medium-sized enterprises, which, moreover, have greater difficulties in finding alternative sources of financing.

The FGS significantly reduced the interest burden on enterprises participating in the Scheme in terms of both new loans and loan redemptions, which helped to improve their profitability. In addition, the Scheme eliminated the exchange rate exposure of enterprises participating in Pillar II, which creates a predictable operating environment for them. The substantial, gradual decline in outstanding corporate foreign currency loans is also important in terms of the national economy, as it reduces financial stability risks.

The Scheme has penetrated all sectors, but agriculture, the manufacturing industry and trade account for a dominant share. The FGS reduced the regional concentration of SME loans. Credit institutions disbursed a higher ratio of loans relative to the total SME loans outstanding to enterprises operating in the Southern and Northern Great Plain regions, while the share of Central Hungary is significantly lower than its ratio within the total SME loan stock.<sup>7</sup>

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<sup>6</sup> This chapter is based on Századvég, 2016

<sup>7</sup> Analysis of the first phase of the Funding for Growth Scheme (<https://www.mnb.hu/letoltes/fgs-analysis.pdf>)



After 2010, Hungary managed to contribute 20-25 thousand transactions a year with preferential assets (the number of transactions jumped to 35-40 thousand with the introduction of the FGS). Most of this was account overdraft (Széchenyi Card) (initially 70-80%, 40-50% after the publication of the FGS).

Most of the transactions were in the trade, car repair, and professional, scientific and technical sectors, as well as in the manufacturing industry - which is in line with the sectoral distribution of domestic enterprises. Commercial banks achieved the highest average loan amount in guarantee programs (HUF 54.9 million), while financial enterprises reached the lowest in the Microcredit program (HUF 5.5 million).

During the 2007-2013 period, a very large network of financial intermediaries was set up. In addition to commercial banks joining the program, financial companies and business development foundations first appeared as intermediaries, and from 2012, savings cooperatives also became involved in the distribution of financial products.

Changing the parameters of financial programs has less impact on demand, it is more significant whether there is a grant for the same purpose or a grant is linked to the financial product. Until grants were available (for technology and infrastructure development), credit and guarantee programs reached an average of 1,000 businesses per year. Demand for financial instruments increased significantly, by 30-40 percent, as non-refundable grants were exhausted.

Between 2007 and 2013, there were several forms of preferential funding for SMEs.

According to the HNB, between 2006 and 2010, 5-10% of the corporate loan portfolio was covered by transactions involving a preferential credit product. Following the launch of the GPS, the ratio jumped to 25 percent in 2013, before rising further in 2014.

The largest share of soft funds – based on the size of the loan – is provided by the GPS, with a weight of nearly 60 percent. The share of Hungarian Development Bank's (HDP) enterprise development products, the Széchenyi Card Programme and EU-funded JEREMIE loan products ranged from 5 to 7 percent.

Exim Group products also play a significant role, accounting for nearly 25 percent of the preferential credit products based on the loan amount. However, it is worthwhile to look at how many enterprises these products reach. For example Exim – with loans for higher medium-sized or large companies – has significantly less transactions than microcredits.



1. Table: Number of transactions per year with various preferential products

Intermediary	Number of enterprises achieved
Products of KAVOSZ	From 2010 onwards, transactions will be between 15 and 20 thousand annually. Without the most popular overdraft instrument, the number of investment and working capital loan is approximately 500 per year.
GPS	10,805 in 2013 and 20,075 in 2014
JEREMIE credit and guarantee products	1,000-2,000 transactions a year (over 6,000 when a combined credit product appears)
National Microcredit Fund	Approx. 500 transactions per year
HDP products	Approx. 500 transactions per year
EXIM products	100 transactions a year, close to 700 in 2014

## Credit Programmes

During the 2007-2013 period, nine refinanced loan programs and three guarantee products were launched, co-financed by the EU. However, these meant a much smaller number of loan programs with different parameters, since the products available to businesses in the convergence regions and in Central Hungary appeared with the same parameters but with different code numbers.

2. Table: Credit Programmes in the 2007-2013 period

Financial instrument	Allocation (billions of HUF)
New Hungary working capital loan (EDOP 4.1)	2.0
New Hungary working capital loan (CHOP 1.3.1)	0.3
New Hungary SME loan (EDOP 4.1)	5.0
New Hungary microcredit (EDOP 4.1)	54.7
New Széchenyi credit (EDOP 4.1)	
New Hungary microcredit (CHOP 1.3.1)	21.1
New Széchenyi credit (CHOP 1.3.1)	
New Hungary combined microcredit (EDOP 4.1)	47.0
New Hungary combined microcredit (CHOP 1.3.1)	11.2

## Guarantee programmes

Two guarantee instruments were launched in the 2007-2013 period: the Portfolio Guarantee Program (called the New Hungary Portfolio Guarantee Program until 2012,



then the New Széchenyi Credit Guarantee Program until 2012), and the New Széchenyi Counter Guarantee Program in 2011.

3. Table: Guarantee Programmes in the 2007-2013 period

Financial instrument	Allocation (billions of HUF)
New Hungary Portfolio Guarantee (EDOP 4.2)	18.9
New Széchenyi Credit Guarantee (EDOP 4.2)	
New Hungary Portfolio Guarantee (CHOP 1.3.2)	7.1
New Széchenyi Credit Guarantee (CHOP 1.3.2)	
New Széchenyi Counter Guarantee (EDOP 4.2)	4.5
New Széchenyi Counter Guarantee (CHOP 1.3.2)	

## Capital programmes

In the 2007-2013 programming period, two types of capital programs were created at the expense of the structural funds.

One is the JEREMIE capital program of Priority 4 of EDOP and 1.3.3 of the CHOP, the other is Széchenyi Venture Capital Fund set up at the expense of the Economic Development Priorities of the Regional Operational Programs (this is Priority 1 per OP, in the case of CHOP, Measure 1.5.3).

## 1.2 What are the options available to Managing Authorities?

Enterprises need a unique resource map that leads them to the right financing instrument for them. However, this resource map should also be available at the decision-making level. The resource map advocated in the SME Strategy 2014-2020 would also provide an opportunity to coordinate the timing and content of financial products. This would mean both content and time delimitation of both non-refundable and refundable types of preferential instruments available for similar purposes.

The experience of the 2007-2013 period shows that procedural and state aid rules defining the framework for the use of EU funds themselves have a significant impact on the applicability of a financial product. The legislative framework represents strong determinations, which constitute a strong barrier to at least two areas (the efficient use of EU funds): the regional delimitation of resources and the potential for more flexible use of overdrafts. Domestic resources should be concentrated primarily on the Central Hungary region and on more flexible loans.



Combined products (grant and loan) are attractive to businesses because of their high support content, while allowing freedom of use. Not only should the possibility of a combination be required in one or two constructions, but other grant beneficiaries should also be encouraged to involve in their development financial resource not from market credit but from a financial instrument (subject to the rules on cumulation and double financing).

There is a consensus among experts that financial instruments can be more attractive if the purpose of use and reporting obligations are "freer" than the administrative constraints of non-repayable grants.

In addition to fine-tuning its parameters, financing instruments require mentoring, "institutional" actors that prepare SMEs to leverage external resources and help them achieve affordable choose the most appropriate financial instrument.

It should build on the widest possible range of intermediaries for financial instruments. The diverse development areas planned for the 2014-2020 period (within the thematic objectives, with several different target areas) require a similarly colorful financial intermediary system.



## 2 Ex-ante assessment: Purpose and preliminary considerations

### 2.1 Scope and value of the ex-ante assessment for financial instruments

#### 2.1.1 Examination of the Hungarian SME market

As a first step towards the ex-ante assessment, a thorough examination has been carried out in the existing Hungarian market. The first finding was the significantly high percentage of SMEs among all businesses. 99% of all companies in Hungary are declared as SME, most of them are either micro- or small-sized businesses. This fragmented market structure is highly sensitive to macro-economic changes and is very fragile. In order to understand the market better, businesses have been divided into two categories based on their main activity. As a result, SMEs were labelled as climate-friendly technology providers and general SMEs. Further market investigation was carried out in both categories using quantitative methods and case studies. The main objective was to map the needs and challenges of SMEs regarding energy efficiency. Within the case studies both climate-friendly technology providers and businesses with relatively high energy consumption were analysed. In the case of the former category, the focus was on barriers and shortfalls of successful market penetration and growth, while in the case of the second group, finding bottlenecks and solutions to reach the most effective operation – with the lowest energy consumption possible – was the main objective. The identified shortages and challenges needed to be thematically structured for further analysis; during this phase two main categories have been determined, the inadequate information including “soft” professional capacities (financial knowledge, management skills etc.) and the financial difficulties.

#### 2.1.2 Studying available financial instruments in the programming period of 2014-2020

Within the 2014-2020 programming period under the EDOP several financial instruments are available for SMEs with different objectives, however it was found that supported loans are not available for the targeted SMEs for energy efficiency related investments. Within the framework of the research only instruments aiming at increasing energy efficiency were studied further. For gathering first-hand experiences, experts from the relevant department of the Ministry of Finance were interviewed. As a secondary research the ex-ante assessment of the relevant available financial instruments have been examined with the aim of identifying best practices,



margins of error and inefficient approaches, both regarding the project implementation and the operational background. Furthermore, existing instruments already in effect, with the same objective have been analysed as good practices (the Italian and Czech model are elaborated within FIRECE), to identify success factors, bottlenecks and transferable features.

## 2.2 Preliminary considerations

Based on former experiences two main barriers hindering the growth of SMEs have been identified: the lack of information and the financial instability.

The existing opportunities within the Operational Programmes for the 2014-2020 programming period are primarily based on non-repayable grants that in some cases can also be applied to SMEs, although with lower aid intensity and stricter conditions (State Aid regulation and De Minimis regulation). This phenomenon mostly occurs within the framework of cross-border cooperation. In the programming period 2014-2020, there are no subsidized or supported loans available for energy efficiency purposes within the Economic Development and Innovation Operational Program. As the above mentioned cross-border cooperation also focuses on regional economic growth, energy efficiency measures are only indirect indicators, therefore the objective set out within the proposed FI does not overlap with the currently available resources within EU funded programmes.

Moreover, since the Hungarian SME's willingness and ability to apply for loans at market rate is rather low, the following preliminary consideration has been taken: Financial instruments are facing challenges to be attractive and competitive on the market against available non-repayable or partly non-repayable funds. In order to successfully apply to any EU funded programme, beneficiaries must have clear objectives, measurable results and they must meet different requirements and indicators. Given the rather inadequate flow of information, the lack of experience with EU funded project management and administration and the expertise to elaborate proper technical amendments, SMEs either do not submit applications, or they fail to meet the criteria during implementation. The attractiveness of EU funded grant or loan schemes is further decreased by their time frame. Due to administrative and legislative requirements, between the submission of applications and the implementation, the waiting time is often 6-12 months. During this time SMEs tend to withdraw from the investment from various reasons (investment prices increase; the management structure changes etc.).





The indicators set out to measure the success of projects or programmes are often vague or imprecise. A structured, clear and integrated monitoring system is required to properly measure outputs and results.



### 3 Assessment of the value added of the financial instrument

The qualitative and quantitative assessment aims at justifying the value added of the proposed financial instrument as well as analysing the consistency with other public interventions and State aid implications.

#### 3.1 Analysing quantitative and qualitative dimensions of the value added for the financial instrument

The main objective of the envisaged financial instrument is to enhance energy efficiency through the support of investments carried out by Hungarian SMEs, operating in various industrial sectors. For this reason, both qualitative and quantitative analyses are presented taking into consideration the public funding experiences of similar interventions.

This objective can potentially be followed by various instruments, thus, different types of support are discussed in comparison. The comparison allows for meeting the objective in the most efficient and effective way.

##### 3.1.1 Quantitative dimensions

Given the aid intensity and the expected private contribution of the FI, the added value of the instrument can be quantified easily in financial terms. The quantitative analysis presents the leverage of grant contribution to the investment at all levels down to the final recipient. The higher the leverage achieved by the instrument the higher its value added.

For detailed quantitative analysis see Chapter 4.2.

##### 3.1.2 Qualitative dimensions

Qualitative dimensions of the value added can be identified as follows:

- The available state aid schemes can be available for all SMEs from each geographic region. **SMEs of Central Hungary**, with high potential for energy efficiency, are not excluded.
- One of the main expectations towards Component A of the grant scheme is to address companies that have not been present on the field of applications and have never been granted any public aid. The **expert pool of Component A** shall cover companies operating in the SME sector and thus, can be a key to **approaching those companies, which are invisible for the Management Authorities**.



- In accordance with the preliminary considerations and the state aid assessment, the proposed financial product **matches a market gap** and is not to be distorting the competition.
- The new, two-component grant scheme has not been provided previously for FIs. Component A can **lighten the administrative burden of the Management Authorities:**
  - The content assessment of the applications is quasi done by the first component, and thus the assessment of the applications can be carried out on a normative basis.
  - The required time for grant decisions can be shorter.
- As a result of the common methodology in Component A, the proposed projects can meet a standard quality.
- Very high expected rate of submitted/ implemented project proposals:
  - Only those project proposals can be submitted for Component B that have gone through a thorough assessment and as a result, prove to be financially and professionally viable for implementation.
  - Former experience of ESIF grants (both repayable and non-repayable) showed that SMEs are especially sensitive to the time factor of the granting procedures. By the time of the grant decision, many granted SMEs decided to withdraw (price rates but also the proposed technical content became obsolete, management strategies have been shifted, etc.)
- The exclusion of non-repayable grants filters project proposals, which are less likely to be financially viable in the long run.
  - When it comes to granted investment projects, a feasibility study is a very well-known phenomenon. Despite their common methodology, these are seldom developed by completely objective, third parties, as they are made by the applicants' contractors. The independent expert pool can guarantee the objective assessment of the desired projects.
- The expert pool, embracing the participating SMEs from all regions of Hungary, shall create a unique knowledge base for energy efficient investments, which gives room for knowledge transfer among all partners and enhances innovation throughout the whole assessment and project development process.



## 3.2 Assessing the consistency with other forms of public intervention addressing the same market

The assessment of consistency aims at avoiding conflicts and overlaps with other forms of public interventions in the very same market segment.

Since the FI is to be part of the programming period 2021-2027, where the other forms of interventions are not yet known, a real consistency assessment cannot be carried out. Nevertheless, the envisaged financial instrument can be compared with interventions of the present programming period.

The latest FI schemes of the Economic Development Operational Programme 2014-2020 and their consistency is discussed below.

4. Table: Identification of grant scheme

Identification of grant scheme	Name of the call	Intervention logic	Remarks
GINOP-8.4.1/B	SME Energy loan	0% loan for revenue-generating projects of SMEs to produce electricity from renewable sources	The loan can be used for very specific purposes, not overlapping with the eligible investments of the proposed FI
GINOP-8.1.3/A-16	Venture-capital programme for National Technology and Intellectual Property	Seed and pre-seed investments in 9 designated sectors, including 'clean and renewable energy' and 'sustainable environment'	Venture-capital investments are more likely to be viable in the core activities of the given companies
GINOP-8.1.3/B-17	Venture-capital programme for smart specialisation	Venture-capital investment for SMEs with great growth potential to develop innovative products and services, which contributes to sustainable urban development and smart cities	Venture-capital investments are more likely to be viable in the core activities of the given companies, while granted projects shall support very specific purposes
GINOP-8.2.1-2015	Supported investment loan for the development of New Generation NGA and backhaul networks	Supported loan for the expansion of new generation broadband networks	Very specific investment objectives, not overlapping with the proposed FI
GINOP-8.2.3-17	Specialised seed and pre-seed private equity fund for ICT start-ups	Venture-capital investment for ICT companies to implement new ideas and market launch	ICT technologies are not likely to overlap with energy efficiency related investments
GINOP-8.2.5-	Venture capital fund	Promotion of Industry 4.0	



Identification of grant scheme	Name of the call	Intervention logic	Remarks
17	for business ICT and digitalisation	technologies	
GINOP-8.2.6-18	Digital Wealth Programme – Loan Programme	Supported loan for major projects to develop digital infrastructure and enhance digital knowledge	The expansion of digital technologies is not likely to overlap with the proposed FI
GINOP-8.2.7-18	Digital Wealth Programme – Capital Programme	Venture-capital investment for major projects to develop digital infrastructure and enhance digital knowledge	
GINOP-8.3.3-17	Irinyi Capital Programme	Venture capital investment for companies in the processing sector to implement development ideas, market launch and business expansion	Venture-capital investments are more likely to be viable in the core activities of the given companies, while granted projects shall support very specific purposes
GINOP-8.3.5-18	Technological modernisation of SMEs loan programme	0% fixed interest rate loan for SMEs to invest in modernised technologies	The general objective of the grant scheme is to improve competitiveness of the participating SMEs, the main output indicator of the projects is the growth of the number of employees, therefore energy efficiency is not a concern of the programme objectives
GINOP-8.4.1/A-17	Loan for energy efficient modernisation of residential buildings using renewable energy	Providing loan for the residents to implement energy efficiency modernisation on buildings	Target group is not overlapping with the SME sector

Based on the assessment of the presently available financial instruments of the operational programmes, supported loans are not available for the targeted SMEs for energy efficiency related investments.

While venture-capital investments are most likely feasible in the market launch of new innovative services and products, investments to increase the energy efficiency of the given company is not typically a core activity, the return on investment is not comparable with the venture-capital investments. Nevertheless, there is a gap on the market to support investments contributing to the minimisation of greenhouse gases (CO<sub>2</sub> equivalent), which is one of the key programme indicators of the Economic Development and Innovation Operational Programme (2014-2020).



## 3.3 Identifying possible State aid implications

### 3.3.1 State aid and non-state aid

In principle, based on Article 107 (1) of the Treaty on the Functioning of the European Union (TFEU), any aid granted by a Member State or through state resources in any form is generally prohibited. The reason of the prohibition is that state aid distorts or threatens to distort competition in the internal market. Favouring certain undertakings or the production of certain goods through state funds that can be either direct i.e. grants provided or indirect, e.g. exemptions from any payment obligations to the state budget is deemed to have an adverse effect on the trade between Member States.

A measure shall be considered as state aid if it involves all the following attributes:

- Transfer of state resources;
- Economic advantage: the aid reduces the costs normally involved in the budgets of the beneficiary undertakings;
- Selectivity: the aid favours certain undertakings or the production of certain goods;
- Distortion of competition, and
- Effect on trade between the Member States.

Transfer of state resources means the use of funds belonging to or being controlled by and imputed to public authorities. The form in which this transfer takes place is irrelevant from state aid perspective.

As the proposed financial instrument is to be deployed by SMEs for energy efficient investments and the source of funding are the Operational Programmes, there is no question if the aid is regarded as state aid and the provisions of the state aid rules apply.

Despite the general prohibition of State aid, in some circumstances government interventions are necessary for a well-functioning and equitable economy. Certainly, there are exemptions from the principle of state aid prohibition. First, there are exemptions where the aid shall be considered to be compatible with the internal market and thus involving no competition distortions. Then there are aid measures that, under certain conditions, might be compatible with the approach of the internal market.



The following may be considered to be compatible with the internal market:

- Regional aid;
- Aid to SMEs;
- **Aid for access to finance for SMEs;**
- Aid for research and development and innovation;
- Training aid;
- Aid for disadvantaged workers and for workers with disabilities;
- **Aid for environmental protection;**
- Aid to make good the damage caused by certain natural disasters;
- Social aid for transport for residents of remote regions;
- Aid for broadband infrastructures;
- Aid for culture and heritage conservation;
- Aid for sport and multifunctional recreational infrastructures;
- Aid for local infrastructures;
- Aid for regional airports;
- Aid for ports;
- **De minimis aid.**

### 3.3.2 State aid of financial instruments

Since the setup of a new financial instrument has to follow the detailed rules of the state aid legal base, an early assessment of the compatibility with state aid requirements is essential. This is because the applicable state aid compatibility is relevant for the main parameters of the design of the FI, in particular eligible applicants, maximum amount of grant, aid intensity.

The need for the ex-ante assessment to consider state aid implications is mentioned several times in Article 37. For this reason, the assessment shall provide evidence that the envisaged FI meets the following requirements:



## **Market Conformity**

As discussed in the introduction of this chapter, the envisaged FI is deemed state aid; therefore further steps of the assessment have to be made.

## **De minimis regulations**

When the proposed instrument falls under one of the de minimis regulations no notification is needed. Based on the assessment of the state aid implications, de minimis aid can be applied for the FI.

## **Block Exemption Regulation**

In case the envisaged FI falls under the general block exemption regulations (GBER<sup>8</sup>) no notification is needed. This implies that State aid must be proportionate to the market failure to be addressed and it should be limited to the minimum rate required to achieve the desired objective. For state aid measures that fall under GBER, these requirements are presumed to be fulfilled. However, should the FI be subject to notification to the Commission, the State aid assessment will be carried out by the Commission (DG Competition) according to the Common Assessment Principles.

For the proposed FI, the following GBER articles are recommended to be applied:

- Aid for access to finance for SMEs – Aid for start-ups (Article 22)
- Aid for environmental protection
  - Investment aid for energy efficiency measures (Article 38)
  - Investment aid for energy efficiency projects in buildings (Article 39)
  - Investment aid for the promotion of energy from renewable sources (Article 41)
  - Aid for environmental studies (Article 49)
- De minimis aid (Regulation (EU) No 1407/2013)

*Regional aid* is not recommended for the envisaged instrument due to the low aid intensities in the more developed geographical regions, whereas one of the main objectives of the FI is to favour energy efficiency investments in these regions too.

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<sup>8</sup> COMMISSION REGULATION (EU) No 651/2014, of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty





*Aid to SMEs – Investment aid to SMEs* can be used with very low grant rate (maximum 10-20%), for this reason, this article of the GBER is not recommended.

*Aid for research and development and innovation* is not in the scope of this FI either, since this aid is not used for investment projects.

### **Off-the-Shelf Instruments**

In case the envisaged FI is an off-the-shelf instrument no notification is needed. The set-up as off-the-shelf should be documented.

### 3.3.3 State aid schemes

#### **De minimis aid**

As per COMMISSION REGULATION (EU) No 1407/2013 *de minimis* aid is an aid granted to a single undertaking over a given period of time that does not exceed a certain fixed amount, therefore is deemed not to meet all the criteria laid down in Article 107(1) of the Treaty and as such, it is not subject to the notification procedure.

In this regard, the ceiling of EUR 200 000 is the amount of *de minimis* aid that a single undertaking may receive per Member State over any period of three years. That ceiling remains necessary to ensure that any measure falling under this Regulation can be deemed not to have any effect on trade between Member States and not to distort or threaten to distort competition.

5. Table: Purpose of the aid

<b>Purpose of the aid</b>	Aid for undertakings to the extent not to distort competition.
<b>Eligible costs</b>	Eligible costs are not specified by the regulation.
<b>Aid intensity/ amount of aid</b>	200.000 €/ undertaking/ 3 years Maximum 100% The period of three years to be taken into account for the purposes of this Regulation should be assessed on a rolling basis so that, for each new grant of <i>de minimis</i> aid, the total amount of <i>de minimis</i> aid granted in the fiscal year concerned and during the previous two fiscal years needs to be taken into account.
<b>Other restrictions</b>	The ceiling of the <i>de minimis</i> amount is 100.00 € in the road freight transport sector.



6. Table: Aid for access to finance for SMEs - Aid for start-ups

<b>Purpose of the aid</b>	Besides guarantees, grant, equity and quasi-equity investment: Loans with interest rates which do not conform with market conditions, with a duration of 10 years and
<b>Eligible costs</b>	Not specified as per the GBER
<b>Aid intensity/ amount of aid</b>	Up to a maximum nominal amount of EUR 1 million For small and innovative enterprises <sup>9</sup> , the maximum amounts may be doubled
<b>Other restrictions</b>	Eligible undertakings shall be any unlisted small enterprise up to five years following its registration

7. Table: Aid for environmental protection - Investment aid for energy efficiency measures

<b>Purpose of the aid</b>	Investment aid enabling undertakings to achieve energy efficiency
<b>Eligible costs</b>	The extra investment costs necessary to achieve the higher level of energy efficiency. They shall be determined as follows: (a) where the costs of investing in energy efficiency can be identified in the total investment cost as a separate investment, this energy efficiency-related cost shall constitute the eligible costs; (b) in all other cases, the costs of investing in energy efficiency are identified by reference to a similar, less energy efficient investment that would have been credibly carried out without the aid. The difference between the costs of both investments identifies the energy efficiency-related cost and constitutes the eligible costs.
<b>Aid intensity/ amount of aid</b>	30 % of the eligible costs. Increased by 20 percentage points for aid granted to

<sup>9</sup> Innovative enterprise' means an enterprise:

- (a) that can demonstrate, by means of an evaluation carried out by an external expert that it will in the foreseeable future develop products, services or processes which are new or substantially improved compared to the state of the art in its industry, and which carry a risk of technological or industrial failure, or
- (b) the research and development costs of which represent at least 10 % of its total operating costs in at least one of the three years preceding the granting of the aid or, in the case of a start-up enterprise without any financial history, in the audit of its current fiscal period, as certified by an external auditor;



	small undertakings and by 10 percentage points for aid granted to medium-sized undertakings Increased by 5/15% in the most disadvantaged regions
<b>Other restrictions</b>	Improvements shall not be granted to ensure that undertakings comply with Union standards already adopted, even if they are not yet in force.

8. Table: Aid for environmental protection - Investment aid for energy efficiency projects in buildings

<b>Purpose of the aid</b>	Investment aid for energy efficiency projects in buildings
<b>Eligible costs</b>	The overall costs of the energy efficiency project
<b>Aid intensity/ amount of aid</b>	The nominal value of the loan or the amount guaranteed shall not exceed EUR 10 million per project at the level of the final beneficiaries
<b>Other restrictions</b>	The aid shall be granted in the form of an endowment, equity, a guarantee or loan to an energy efficiency fund or other financial intermediary, which shall fully pass it on to the final beneficiaries being the building owners or tenants.  <b>The energy efficiency aid shall leverage additional investment from private investors reaching at minimum 30 % of the total financing provided to an energy efficiency project.</b>

9. Table: Aid for environmental protection - Investment aid for the promotion of energy from renewable sources

<b>Purpose of the aid</b>	Investment aid for the promotion of energy from renewable energy sources
<b>Eligible costs</b>	The extra investment costs necessary to promote the production of energy from renewable sources. They shall be determined as follows: (a) where the costs of investing in the production of energy from renewable sources can be identified in the total investment cost as a separate investment, for instance as a readily identifiable add-on component to a pre-existing facility, this renewable energy-related cost shall constitute the eligible costs; (b) where the costs of investing in the production of energy from renewable sources can be identified by reference to a similar, less environmentally friendly investment that would have been credibly carried out



	without the aid, this difference between the costs of both investments identifies the renewable energy-related cost and constitutes the eligible costs; (c) for certain small installations where a less environmentally friendly investment cannot be established as plants of a limited size do not exist, the total investment costs to achieve a higher level of environmental protection shall constitute the eligible costs.
<b>Aid intensity/ amount of aid</b>	45% (in case of eligible costs a) and b)) 30% (in case of eligible costs c)) Increased by 20 percentage points for aid granted to small undertakings and by 10 percentage points for aid granted to medium-sized undertakings Increased by 5/15% in the most disadvantaged regions where aid is granted in a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria, the aid intensity may reach 100 % of the eligible costs.
<b>Other restrictions</b>	The investment aid shall be granted to new installations only.

*10. Table: Aid for environmental protection - Aid for environmental studies*

<b>Purpose of the aid</b>	Aid for studies, including energy audits, directly linked to investments under the GBER Section 'Aid for environmental protection'
<b>Eligible costs</b>	All costs of the studies
<b>Aid intensity/ amount of aid</b>	50 % of the eligible costs Increased by 20 percentage points for aid granted to small undertakings and by 10 percentage points for aid granted to medium-sized undertakings
<b>Other restrictions</b>	Aid shall not be granted to large undertakings for energy audits carried out under Article 8(4) of the Directive 2012/27/EU



### 3.3.4 The use of state aid schemes for the FI

#### **Component A**

As Component A is not an investment project, only de minimis aid and the aid for environmental studies are applicable.

Although the activities of the component meet the requirements of both aid schemes, there are certain provisions, which have to be concerned during the design of the instrument and to be complied with during the implementation phase as well.

- De minimis aid: it has to be taken into account that the aid of the component, given to the expert team, is indirect aid on the level of the companies and is not to be regarded as a de minimis aid of the beneficiary of Component A. Although the companies go through an energy audit and receive a study free of charge, this service is deemed as an economic advantage, thus, the market value of this service should be considered state aid on their level. In case de minimis aid applies for this service, the 200.000 € de minimis frame of the given company has to be reduced.
  - In case the remaining de minimis aid of the company does not cover this cost, the aid for environmental studies can be used and the necessary own contribution has to be reimbursed.
- Aid for environmental studies: since this aid scheme does not allow 100 per cent intensity, the company has to reimburse the own contribution part.

De minimis aid or aid for environmental studies, the beneficiary of Component A has to sign a grant contract with all companies.

#### **Component B**

As project activities can be diverse under Component B, various aid schemes, detailed above, can be used by the final beneficiaries.

With respect to all the provisions of the different aid schemes, they can be cumulated within the same investment project.



## 4 Additional public and private resources to be potentially raised by the financial instruments

The most common financial instruments are public loans, public equity, venture capital, or credit guarantees – which are becoming increasingly widespread in regional and local economic development. The crisis led to a long-term problem with access to finance in many countries. According to the European Central Bank, in 2009 around 17% of firms in the euro area argued that access to finance was their most pressing concern. This figure has decreased significantly; in 2016 it was closer to 9%<sup>10</sup>. Stretched budgets have encouraged policy makers to seek new ways to leverage finance for public projects.

The need for enhancing the economic development leads to a growing interest from policy makers in the use of financial instruments. Financial instruments as public sector loans, guarantees and equity finance schemes are increasingly viewed as tools for enhancing the performance of small and medium-sized enterprises (SMEs). Therefore, there is a shift in EU Cohesion Policy which promotes financial instruments to the detriment of grant-based funding.

### 4.1 Estimating additional public and private resources

A stable financial background is the key to success and development of any kind of company where various options are available nowadays. The followings and their combinations are the most common forms of additional public and private resources.

#### 4.1.1 Grants

In Hungary the public sector has deployed a wide array of grant instruments, which target innovation, development of labour force, competitiveness and efficiency. The basic property of grants is that there is no requirement that the firm repays or returns any of the financial costs to the public sector until it meets specific monitoring indicators.

On the other hand, the effectiveness is often debated for different reasons.

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<sup>10</sup><https://www.ecb.europa.eu/pub/pdf/other/ecb.accesstofinancesmallmediumsizedenterprises201705.en.pdf?17da4ff2a730b7ababea4037e4ce8cae>



First, grants may change the mentality of the leaders of the private sector in the sense that the development interventions are triggered only by grants. In the case of greater distance in time between two grant-based funds, vital developments may be postponed which may decrease competitiveness and resilience.

Second, the easily accessible, “free” financial resources may allow the implementation of less effective or relevant projects. Without additional corporate financial support, the outcomes of the projects may be considered less valuable.

Grants are effective when they target projects or companies in the early development stage in order to help them later achieving private capital as venture investments.

#### 4.1.2 Loans

In the case of loans, generally three participants can be distinguished, the financial institution who decides the volume of the loan provided, the repayment terms and the interest rate. The loan may have the following properties:

- fixed or variable interest rate;
- the financial institution may put a lien on the property;
- a new application should be initiated if another loan is needed;
- loans can be repaid according to various repayment terms –monthly, quarterly, bi-annual or annual, or one-off bullet repayment.

Loans are the traditional and most common forms of funding mechanisms used by SMEs.

#### 4.1.3 Equity finance

The basic working mechanism of equity finance is based on the exchange of capital in return for financial support and liquidity. Shares normally offer associated voting rights and the rights to repayment on the breakup of the entity or to dispose of the shareholding. Main targets of equity finance are seed and start-up companies which are known for innovation, high-tech solutions, products, and who have great growth potential. Based on the short existence and poor financial indicators, investing in these firms is riskier, therefore bank loans are not accessible to them.

Typical providers of external equity financing are:

- business angels;
- seed funds;
- venture capital funds (including private, corporate affiliates, or government-sponsored).



In Hungary Széchenyi Venture Capital Fund Management Ltd. and Hiventures Venture Capital Fund Management Ltd. are examples for venture capital providers, which have multiple funds options for small and medium enterprises.

Investors often provide not only financial support but also networking options, experience in managing and developing high growth potential companies.

#### 4.1.4 Credit guarantees

The main function of credit guarantee is reducing the risk associated with loan by a guarantee of repayment of part of the loan upon a default event. Creditworthiness is essential to SMEs for maintaining liquidity and financing core projects.

## 4.2 Estimating the leverage of the envisaged financial instrument

Since the grant of **Component A** is to be solely a grant scheme, this **is not part of the quantitative analysis**.

As per the EIB methodology<sup>11</sup> of the FI ex-ante assessments, the **leverage effect** of Union funds shall be equal to the amount of finance to eligible final recipients divided by the amount of the Union contribution. Financial instruments shall aim at achieving a leverage effect of the Union contribution by mobilising a global investment exceeding the size of the Union contribution.

The quantification helps to rank different options. The lower the intensity for a given project or group of projects the higher the value added.

In a case where the financing of the other components of the investment comes from banks or other external sources the leverage equals the quantified value added.

Two examples illustrate the link between leverage effect and value added through the comparison of non-repayable grant scheme and the proposed loan scheme.

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<sup>11</sup> Ex-ante assessment methodology for financial instruments in the 2014-2020 programming period, European Investment Bank, 2014





### **Quantitative value added and co-financing of a grant scheme**

Let us assume that a project having a total cost of 100 million HUF is co-financed by a state aid scheme with non-repayable ESIF contribution (de minimis aid/ aid for environmental protection). ESIF financing and co-financing cover 80 million HUF of the total cost. The ESIF maximum co-financing rate of the hypothetical case is 90%. The 20 million HUF not covered by the ESIF intervention and the co-financing could be noneligible parts of the investment where other sources of public or private financing are mobilised.

1. Figure: Sources of public or private financing



Other source    ESIF (grant)    Regional budget

### **The FI compared with a fixed interest rate subsidy scheme**

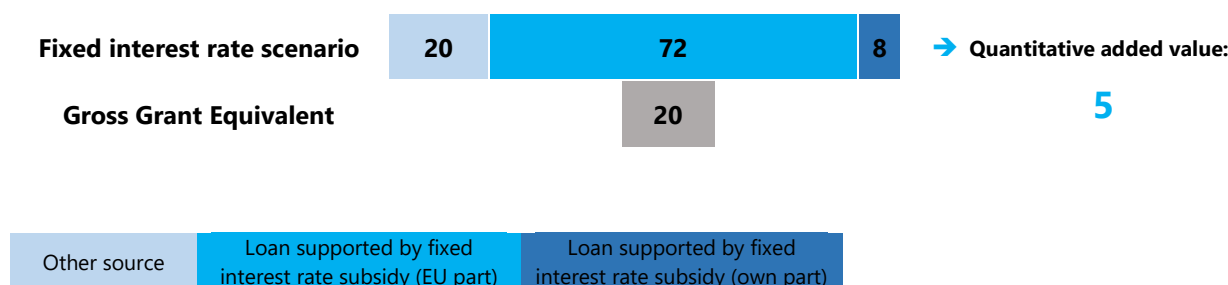
The below calculation is an example for quantifying the added value of a granted project under the proposed scheme, applying a fixed, zero interest rate on the loan.

- Total project cost: 100 million HUF
- Eligible cost: 80 million HUF
- Maximum rate of loan covering eligible costs: 90%
- Own contribution: 28 million HUF (20 million HUF non-eligible cost, 8 million HUF own contribution from eligible cost)
- Maturity: 10 years
- GGE, Gross Grant Equivalent: 20 million HUF

The Gross Grant Equivalent (GGE) means the amount of the aid if it had been provided in the form of a grant to the beneficiary, before any deduction of tax or other charge. As the GGE of the given scheme is ex-ante estimated and is determined by external factors of the economy, the above example counts with a hypothetical estimation.



2. Figure: Fixed interest rate scenario, gross grant equivalent



The quantitative comparison of the repayable and the fixed interest rate supported FI scenarios allow us to illustrate the difference between their economic effect based on similar financial parameters.

### 4.3 Attracting additional private resources

Energy efficiency projects have exact cost-benefit parameters, which open the way for private financing. Profitable investments may attract various forms of finance:

#### ESCO model

The ESCO model is based on the energy savings reached at an energy efficiency project, which serves as the financial guarantee for interest payments. This model guarantees savings for a set period of time in exchange for payment from the energy cost savings. An Energy Services Company (ESCO) will assess the efficiency opportunity, purchase equipment necessary to improve performance and install the equipment. Most ESCOs will provide a financing option for these services as well, but depending on the ESCO, the building owner may be required to seek outside financing. The source of the investment may come from both private banks and property owners.

#### Green bond

A green bond is a bond issued by private banks specifically earmarked to be used for climate and environmental projects. These bonds are typically asset-linked and backed by the issuer's balance sheet, and are also referred to as climate bonds. Green bonds are designated bonds intended to encourage sustainability and to support climate- or environment related projects. More specifically, green bonds finance projects aimed at:

- energy efficiency;



- pollution prevention;
- sustainable agriculture;
- fishery and forestry;
- the protection of aquatic and terrestrial ecosystems;
- clean transportation;
- sustainable water management;
- cultivation of environmentally friendly technologies.

Green bonds – in order to raise their competitiveness compared to comparable taxable bonds - come with tax incentives such as tax exemption and tax credits, making them a more attractive investment. This provides a monetary incentive to tackle prominent social issues such as global climate change and a movement to energy efficiency and renewable resources of energy.

### **Utilising community finance**

A group of individuals together may possess the sufficient financial background to carry out energy related investments. Community finance may have an advantage compared to other forms of financial instruments in that they may tolerate a lower rate of return. The community may prioritise attributes of a given energy project like the improved living conditions or energy independence.



## 5 Lessons learnt

### 5.1 Gathering relevant information

First, the complex analysis of the Hungarian market has been carried out, e.g. bottlenecks, success factors and pitfalls including all types of SMEs have been identified and analysed. As 99% of all businesses fall into this category, the elaboration of an instrument with focus on energy efficiency investments among businesses must be a top priority. During the market assessment several SMEs were thoroughly analysed to collect a representative amount of data on the market, furthermore, one SME from both SME categories were the subjects of case studies. Currently available information and relevant regulations regarding energy efficiency in businesses were also studied as well as existing financial instruments within the previous and current programming periods. When assessing currently available financial instruments, it has been found that no options are available for energy efficiency purposes. Besides discovering and understanding the needs and potentials of the market, the relevant institutional and regulatory framework also had to be examined, as the proposed FI has to meet the requirements of such frameworks, such as State Aid regulations. Possible additional private and public sources of finance were also included into the analysis, to determine the composition of the FI. The evaluation of the market has shown that Operational Programmes are the most sustainable and viable solutions, that are able to attract potential beneficiaries, but in order to carry out a thorough analysis, potential additional resources have been studied (e.g. venture capital, private equity etc.).

During the secondary analysis of existing programmes, instruments and ex-ante analyses, main bottlenecks, pitfalls and success factors have been identified.

### 5.2 Identifying success factors and pitfalls of past experiences

#### 5.2.1 Success factors

During the analysis of available instruments, it has been found that businesses tend to apply for loans/grants if the eligible activities are less regulated. As requirements and specifications increase, the general interest towards the instrument is decreasing. SMEs are on some level often eligible for grant schemes, thus incorporating non-refundable elements into the proposed FI is highly recommended. The added value of the instrument results from its leverage level; therefore great attention should be



paid to it. The administrative and reporting tasks of EU funded projects are significantly high, which was identified as a burden, particularly in the private sector. The proposed FI shall include simplification measures, and clear terms of reference for beneficiaries.

### 5.2.2 Pitfalls

Based on the market assessment, most pitfalls and margins of error can be traced back to two major causes: the lack of information and the unstable financial capacities. Currently the legislation in Hungary only requires energy consumption data from businesses with a minimum annual energy consumption of 400 000 kWh. Consequently the majority of SMEs have no information about their consumption level. The available financial instruments require a certain level of management capacities, own contribution and administrative tasks, which can pressure SMEs greatly. Moreover, improvements aiming to increase energy efficiency return in the long run, and have a rather high investment cost, which factors are reducing the attractiveness of such investments. The general attitude towards corporate loans as well as the credibility of businesses is lower than the average, hindering the competitiveness of financial instruments even more. These factors combined with the usually insufficient equity of businesses in many cases lead to market failures and to the inability to grow. Due to this phenomenon, attracting additional resources becomes almost impossible.

## 5.3 Applying lessons learnt to enhance the performance of the financial instrument

After the market analysis, five possible FI schemes have been identified, based on their target group and the method of financing (direct or indirect support). The two most pressing market problems were also discovered. The aim of the FI was to find the most suitable solution to ease up the found problems, without significantly limiting the number of eligible businesses. For determining the structure and operation of said FI, existing programmes and financial instruments have been analysed internationally. The FI was then adjusted according to those findings, as well as according to the result of two stakeholder meetings, and a meeting with the relevant department of the Ministry of Finance. The related regulations were constantly taken into account through the process, and necessary changes on the FI were made. As one of the main objectives was to elaborate an instrument viable and competitive on the market, the needs and limits of potential future beneficiaries were



taken into account. As a result, administrative and reporting tasks as well as scheduling were kept as simple and efficient as possible.

### 5.3.1 Proposed investment strategy

The overall goal of the FIRECE project is to establish innovative financial solutions to facilitate the transition to low carbon emission among small and medium-sized enterprises. Based on a preliminary market research conducted in the Hungarian energy sector, the most severe existing market problems as well as evidence of market failure have been identified and analysed.

The first step towards establishing a viable and suitable financial solution is to identify the most pressing market problems, which are the following:

- **Lack of information** – the properties of general energy consumption of firms, or specific information for running a business for climate-friendly companies;
- **Lack of financial support** – energy efficiency projects or developing climate-friendly companies need stable financial background.

A stable financial background is the key to success and development of small and medium enterprises where innovative financial instruments – or their combinations – could be the main tools.

In chapter five innovative instruments are described and evaluated by using a set of criteria.

#### ***Financial instruments are***

##### *1. Direct funds for every small and medium enterprise*

The main objective of the financial instruments in the FIRECE project is to achieve energy innovation thus **creating energy returns in SMEs**. The greatest impact in energy returns can be created when the number of subjects reached by the instrument is the highest; therefore the first innovative financial instruments target **every SME in Hungary**.

The number of small and medium enterprises is 718 000 (99% of all) which highlights the size of the potential energy savings in this area.

Companies in various sectors of the economy have different energy consumption patterns. In 2017 the total final energy consumption was 752,5 PJ from which industry contributed 24 %, services and commerce 10 % and agriculture 3 %.



Energy usage of companies can be divided into two groups: *maintenance and technology dependent consumption*.

**Maintenance consumption** is connected to heating/cooling, lighting and the devices (not production related) of the office building or factory. These consumptions can be reduced by improving building insulation, upgrading the heat producing installations or air conditioning devices, utilising energy saving lightings (most common are LED lamps) and more energy efficient equipment (computers, elevator, printers and scanners). These improvements may results in energy saving regardless of the main operation area of the company.

The most energy returns in a company can be achieved by altering the ongoing operation with promoting energy efficiency. That can be achieved by having the information of the existing operation and viable other technologies and their cost-benefit parameters.

Energy efficiency projects may have various financial sources from state grants to private capital. The predictable cost-benefit parameters of the investment loans or equity investments are also viable regarding maintenance or technology related energetic developments. In spite of the number of financial instruments, grants and low-cost/state supported loans proved to be workable due to the following reasons:

- with reducing every KWh/m<sup>3</sup> energy the costs are exponentially increasing;
- energy prices in Hungary are one of the lowest in Europe which influence the energy returns negatively;
- reduction in energy consumption may not be the outcome for which companies are taking out loans or sell their shares to equity finance providers.

Another component of the low number of energy investments is the lack of information from the potential savings, new technologies and their cost effectiveness.

**It follows from the foregoing that the first financial instrument provides grants from operational programmes combined with state supported loans which serve as a direct financial support for every SMEs' energy efficiency investments.**

## *2. Direct funds for climate friendly small and medium enterprises*

Reaching energy innovation and producing energy savings can be achieved not only by financing *regular* companies but also by supporting those who are part of the green economy transition with their innovative products or services. These companies have great impact not only on existing markets by providing new technologies but have the potential to create new ones. Their innovation potential may change or



disrupt different sectors of economy while forcing the other companies to follow the direction of development.

There is no universally accepted definition for “climate-friendly” enterprises because that could mean both companies which contribute to green economy transition with supplying technologies, equipment (solar panels, water filtration, smart metering, biotechnology, waste management, etc.) or firms which operate in current markets but using advanced, environment friendly technology (steel industry, agricultural producers, etc.).

As these companies act like pioneers, they often have financial difficulties which hinder their development and international market penetration. On the other hand – unlike at the first FI – as an innovative, high growth potential company, financial instruments can be more diverse also containing various loan or equity finance products. The main limiting factor for these companies is information in the following areas:

- the required set of competence and experience is missing – an innovative idea alone does not result in success, a well-established corporate background with human resources; legal and accounting knowledge is also needed;
- the financial instruments are not known or the company is hidden from the investors;
- even if the connection is established between the company and the investor, the innovation and scaling potential of the project cannot be identified or understood easily, – especially when mechanical or IT knowledge is needed – therefore the investment seems to be riskier.

In summary, the 2<sup>nd</sup> finance instrument is targeting **climate friendly companies** with **direct** finance solutions, combining state funds with private capital. The most common elements of a developing company are:

- prototyping – creating the first demo product;
- purchasing equipment – machines, software or raw material;
- ensuring a place for the production;
- building up the proper human resources;
- promoting liquidity.

### 3. *Two-component fund* for every small and medium enterprise





Similar to the 1<sup>st</sup> and the 3<sup>rd</sup> financial instrument, this also targets every small and medium enterprise in order to maximise its potential impact. The main difference is the two-component mechanism, which is:

- A. Component: Establishing an organisation which collects various experts in two areas – technology and economy. The company will be audited by the following aspects:
  - a. the energy consumption of maintenance and production with identifying the potential savings;
  - b. potential technological improvements – alternatives to the existing devices, processes;
  - c. cost-benefit analysis of the technological shift;
  - d. potential financial sources of the development – creditability, grant need.

The final product of the audit is a report with which companies will be permitted to apply to Component B where the identified energy innovation will get financial support in a form of grant and state-supported credit facilities.

**The advantage of the two-component financing model is the validated, complex and relevant information about the energy parameters of the company which ensures the effectiveness in using the allocated funds.**

#### 4. *Two-component fund for climate-friendly* small and medium enterprise

The 4<sup>th</sup> financial instrument is very similar to the 3<sup>rd</sup> in that it also uses the two-component auditing. The main difference is the goal and complexity of the audit. With being climate friendly in focus the main outcome of the audit is a complex analysis of the potential of the company, with maximising its impact on the existing markets or creating new ones.

- A. Component: Establishing an organisation which collects various experts in three areas – technology, legal and economy. The company will be audited by the following aspects:
  - e. the potential energy return on investment
  - f. market analysis
  - g. identifying potential partners, supporters
  - h. legal obstacles and framework
  - i. cost-benefit analysis
  - j. scalability of the product/service



The final product of the audit is a report which is not only helpful for the strategic development of the company, but provides relevant information for the financial actors – banks and equity finance and grant providers.

### 5. *Equity finance for climate-friendly* small and medium enterprises

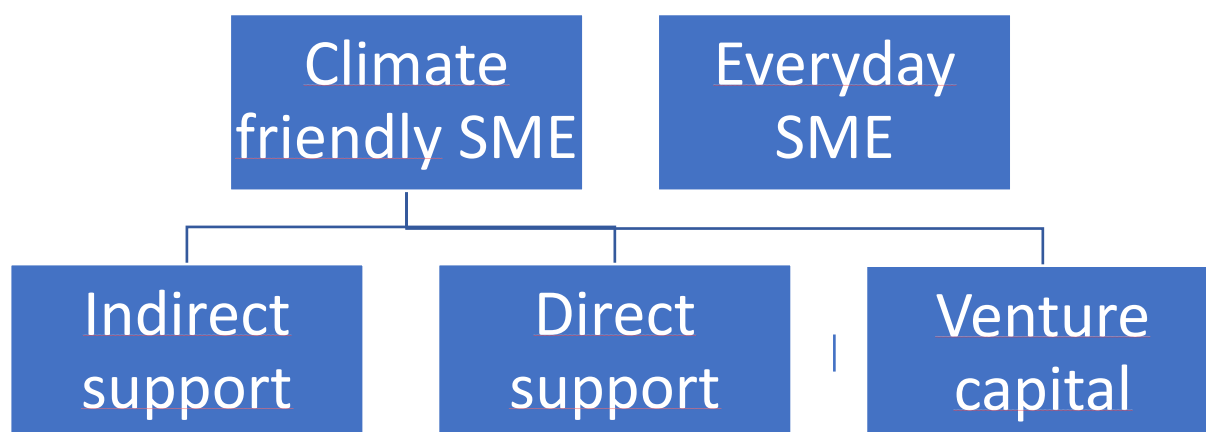
Equity finance is a unique opportunity for innovative SMEs with high growth potential for maintaining liquidity and creating a stable basis for higher technological advancements and market penetration.

This financial option may prove to be a significant help for incubating project ideas to products or services, especially for start-ups or other enterprises in the early development stage. Moreover, it helps companies to attract other resources like higher amount of venture capital – from for example Széchenyi Tőkealap-kezelő Zrt. and Hiventures Kockázati Tőkealap-kezelő Zrt.

The final product of the audit is a report which is not only helpful for the strategic development of the company, but provides relevant information to the financial actors – banks and equity finance and grant providers.

The five financial instruments can be summarised in the following figure:

3. Figure: Summarise financial instrument





The various financing schemes highlighted the need for evaluating both the different financial instruments (+grant option) and the funding mechanism. The multi-criteria analysis of the financing options is the following:

**11. Table: Multi-criteria analysis of the financing options**

Criteria	1. Grant	2. Subsidised loan	3. Equity finance	4. Credit guarantees
Expectation on return	4	2	1	3
Popularity in the Hungarian market	4	3	2	1
Administrative burden	3	1	4	2
Revolving capacity	1	4	3	2
Leverage effect	2	4	3	1
Available amount of funds on the market	4	3	2	1
<b>Overall scores</b>	<b>18</b>	<b>17</b>	<b>15</b>	<b>10</b>

*Note: 1-5 categories, where 5 – best option, 1 – worst option*

The multi-criterion table showed that the combination of grant and loan shall maximise the financial effectiveness of the instrument.

The next step to concretise the chosen financial instrument is to summarise their impact on companies:

**12. Table: Summarise the impact**

Criterion	1. Direct fund / every SMEs	2. Direct fund / Climate-friendly SMEs	3. Indirect fund / every SMEs	4. Indirect fund / every Climate-friendly SMEs	5. Equity finance for climate-friendly SMEs
<b>Potential number of beneficiaries</b>	5	3	4	2	1



Criterion	1. Direct fund / every SMEs	2. Direct fund / Climate-friendly SMEs	3. Indirect fund / every SMEs	4. Indirect fund / every Climate-friendly SMEs	5. Equity finance for climate-friendly SMEs
Generated additional investments	2	1	4	3	5
Effectiveness of the investment	2	1	5	4	3
Business/project incubation capacity	2	1	5	4	3
<b>Overall scores</b>	<b>11</b>	<b>6</b>	<b>18</b>	<b>13</b>	<b>12</b>

The multi-criteria analysis showed the potential in the two-component fund which enhance the energy efficiency of every SME. The key of the chosen instrument is the audit (component A) process, which helps to gather the relevant energy and economical information that lower the risk of the investment and carry potential technological improvements. Both may facilitate the success of the instrument and the development of the Hungarian SME sector.

## 5.4 Process to develop the proposed investment strategy

### 5.4.1 Elements of the investment strategy

The selected finance instrument is based on two components, which are:

**Component A** – initiating a complex energy audit and creating an audit report. The audit focuses on the following areas:

- energy related parameters of the company – both maintenance and technology related aspects;
- financial audit – by analysing the company, key financial indicators can be identified which help to indicate creditability and minimise the risk associated with venture capital;



- identifying energy investment elements – one of the main focusing areas of the audit is describing energy intervention options by showing their cost-benefit parameters.

The abovementioned audit components need various experts from engineering to economist. The main advantage in component A is the synergies between the different areas which lead to a complex energy-economy approach towards energy efficiency.

**Component B** – is designated to finance the investment options identified in the Component A audit report. The form of finance can be both grant and loan based which depends on the project's characteristics.

#### 5.4.2 Time frame

Due to the exhausted funds in the ongoing operation programmes, the time frame of the financial instrument would focus on the next, 2021-2027 programming period. The first project would not be initiated before 2022.

The time frame of the projects (Component A and B together) is described by the audit report (it is technology dependent) but at least two years are needed to create the audit report and implement the identified development elements. After ending the projects, the results and equipment should be maintained for at least three years.

#### 5.4.3 Outcomes

The two-component financial instrument gives both information and financial sources for development which are the main weaknesses of Hungarian SMEs. The supplied information in component A may not always lead to a project in component B, but helps to lay down the foundation of a future energy efficiency related investment which may attract private funds.

In numbers, we estimate that at least 300 SMEs should be audited in component A which leads to at least 250 energy efficiency projects.

## 5.5 Defining the scale and focus of the financial instrument

### 5.5.1 Beneficiaries

The main goal of component A is to create the pool of experts in the following areas:

- Energy auditing,



- Experience in planning and implementing energy efficiency projects,
- Experience in the implementation and assessment of state aided loan facilities,
- Business planning,
- Experience in state-aid mechanisms,
- Experience in programming and implementing Operation Programs.

The beneficiary of **Component A** shall cover companies operating in the SME sector and thus, can be a key to **approaching those companies, which are invisible for the Management Authorities**. The most effective way of cooperation between companies is forming a consortium which initiates the audits.

Component B is designated for promoting energy efficiency at Hungarian SMEs that are the potential beneficiaries. Only those companies are viable to participate in component B which were audited in component A and have the audit report.

### 5.5.2 Financial support options

Financial framework of Component A: 4.0 billion HUF. The fund shall cover the costs of the auditors; therefore the process would be free for the audited companies. The form of the fund is based on the finance of the 2021-2027 operation programme.

Financial framework of Component B: 25.0 billion HUF. The fund would consist of the combination of grant and loan instruments at the same time; therefore it shall build on various sources from operation programmes to private capital. In order to collect and manage the different financial sources, creating an energy fund is recommended.

## 5.6 Defining the governance structure of the financial instrument

The structure of component A is clearly different from component B which is run by the management authority. It is based on the cooperation of different professionals in various areas from engineering to economy. The cooperation is the most effective when it is coordinated in a consortium by the consortium leader.

In return of the grant in component A, the consortium's responsibility is to find the suitable SMEs that would participate in the audit process and would be the subject of the energy efficiency project in component B. After a cooperation agreement with the audited company, the consortium may start the measurements. The outcomes of the



audit would be summarised in the audit report which is created by the consortium and signed by the two parties.

Component B is run by the management authority where companies that possess the audit report may participate. Only those elements may get a grant or aided loans which are identified in the audit report. The Management Authority selects the eligible applications by taking account of the economic and technological aspects of the project ideas.



## 6 Specification of expected results consistent with the relevant Programme

### 6.1 Establishing and quantifying the expected results of the financial instrument

This chapter specifies the expected results of the financial instruments and how the FI is expected to contribute to the achievement of the specific objectives and results of the relevant operational programme as well as measuring indicators for this contribution.

During the design of the financial instrument, the expected results and outputs of the FI within the priority of the Programme shall be clearly specified. As part of the set of indicators, the reference and target values have to be defined as well, based on the specific contribution of the FI to the priority of the Programme results and outputs indicators.

Output or result indicators shall be derived from the relevant operational programme to be designed for the 2021-2027 financial period. The recommended indicators of this chapter are in line with the present programming period.

#### 6.1.1 Output indicators

For a new FI, the Managing Authority should use the set of common indicators already predetermined in the fund-specific Regulations or complementary documents provided by the Commission.

Besides common indicators, additional FI performance indicators can be defined with regard to measuring the operational efficiency of FI implementation.

Recommended output indicators are listed below, taking into account the nature of the financial instruments and the nature of energy efficiency investment projects. The name of the indicators and their definition are based on the use of the present programming period.

13. Table: Relevant common ERDF indicators of the Economy and Innovation Operational Programme

Name of indicator	Unit	Remarks	Target value
Number of granted companies	number of companies	Profit-oriented legal entities, regardless of the form of the company	250





Number of granted companies receiving other than non-repayable grants	number of companies	Companies receiving grants in the form of loans, interest rate subsidy, loan guarantee, venture capital or other FI	250
Decrease in greenhouse gases per year	tonne of CO <sub>2</sub> equivalent	Decrease in the use of energy consumption through interventions aiming to produce renewable energy or lead to energy-efficiency	To be estimated in the feasibility studies

### 6.1.2 Result indicators

Since result indicators are the objective proof of the projects' success, there should be special attention paid to the definition of clear and measurable result indicators. The result indicators must be clearly interpretable, statistically validated, truly responsive and directly linked to the specific objectives of the investment priority or focus area the FI is contributing to. For that, the implementation of the FI should affect the value of the selected result indicator under the corresponding investment priority or focus area.

Recommended result indicators are listed below, specific to investment projects aiming to achieve energy efficiency.

14. Table: Relevant programme specific ERDF indicators

Name of indicator	Unit	Remarks	Target value
Decrease in primer energy consumption in the buildings of companies	kWh/year	Difference between the energy consumption comparing the before-the-project and after-project scenarios as per the energy certificates of the relevant buildings.	To be estimated in the feasibility studies
Decrease in primer energy consumption after energy-efficiency interventions	PJ/year	Difference between the energy consumption comparing the before-the-project and after-project scenarios of the energy efficiency interventions as per the energy certificates of	To be estimated in the feasibility studies



Name of indicator	Unit	Remarks	Target value
		the relevant buildings.	
Amount of energy gained from renewable energy sources	PJ/year	Amount of energy produced by any equipment installed in the framework of the investment	To be estimated in the feasibility studies

## 6.2 Specification of how the financial instrument will contribute to the strategic objectives

For a new grant scheme, it has to be specified how the FI contributes to delivering the strategic objectives for which it is set up. In line with the logical framework approach, the correlation between output and result indicators as well as the objective of the proposed financial instrument is presented in this chapter.

15. Table: Indicators

		Indicators
<b>Goal</b>	Enhance energy efficiency through the support of investments carried out by Hungarian SMEs	Decrease of environmental damages caused by greenhouse gases
<b>Purpose</b>	The share of renewable energy is growing within the overall energy consumption	Result indicators: Decrease in primer energy consumption in the buildings of companies Decrease in primer energy consumption after energy-efficiency interventions Amount of energy gained from renewable energy sources
<b>Output</b>	Decrease in harmful GHGs caused by the operation of SMEs	Output indicators: Number of granted companies Number of granted companies receiving other than non-repayable grant Decrease in greenhouse gases per year
<b>Activities</b>	Implement energy saving investment projects	Budget of the participating SMEs, including own sources and supported loans Investment costs spent on buildings,



	<b>Indicators</b>
	equipment, ICT and related services

## 6.3 Monitoring and reporting

It is essential for the Managing Authorities to set up target results and a practical monitoring system to monitor the performance of the instrument and its contribution to the overall objectives.

Besides monitoring the performance of the FI, the monitoring system has to facilitate reporting requirements and identify any improvement areas.

Main elements of the monitoring process:

- Data collection
- Operational reporting
- Financial reporting
- Measurement of indicators
- Evaluation reports
- Monitoring, analysing
- Corrective actions if needed, based on the findings of the monitoring

The Managing Authority has to ensure that the reporting requirements are met. Monitoring and reporting requirements should be defined by the Managing Authority and by the manager of the fund. The two might be under the same entity (e.g. under the Ministry of Finance). Since the expert pool is not to be a financial intermediary, it will not be responsible for reporting during the implementation of Component B. The manager of the fund will collect both the output and result indicators.

As regards to state aid measures, the Managing Authority shall pass on to the Commission the summary information about each aid measure exempted under the state aid regulation. In order to enable the Commission to monitor the aid exempted from notification by the Regulation, Member States shall maintain detailed records with the information and supporting documentation necessary to establish that all the conditions laid down in the state aid regulation are fulfilled. Such records shall be kept for 10 years from the date on which the aid was granted or the last aid was granted under the scheme.



## 7 Provisions for the update and review of the ex-ante assessment methodology

The implementation phase of the financial instrument may involve market conditions and investments trends. Article 37 (2) (g) CPR requires that the ex-ante assessment includes provisions for its revision and update, so the ex-ante assessment represents the actual market conditions. The Managing Authorities can change the ex-ante assessment when it is necessary, for example if the expected result of the FI is not achieved, or if some important parameter has changed.

Article 37(1) CPR states explicitly that FIs shall be implemented to support investments which are expected to be financially viable. According to Article 37(2), CPR aims to identify market failures and to justify the decisions to set-up a specific FI. A specific FI shall be considered for which form, which amounts, with which implementation structures, etc.

The need for update and review of the ex-ante assessment could be signalled through:

- Regular reporting/monitoring of the FI,
- Ad hoc or planned evaluations,
- Predefined trigger values (which are compared with the reporting figures),
- Revolving funds envisaged for reinvestment constitute additional resources for investment in the future.

Provisions allowing the ex-ante assessment to be reviewed:

- Rationale for the revision of the ex-ante assessment;
- Practical and methodological procedures to update the ex-ante assessment;
- Steps to adapt the FI implementation.

The volume of the update and review:

It is very difficult to predict the volume of the update and review as it depends on how drastic the changes in the economic environment and the whole financial perspective are, or there is just a little alteration in certain parameters.

In total, the update clause contributes to a more flexible environment, the Managing Authorities can take action, if necessary, to improve the strategic fit of the FIs.



## 8 Ex-ante assessment completeness checklist

16. Table: Key checklist points

Have you considered?		
Key checklist points	CPR Reference	(Yes/No)
Identification of market problems existing in the country or region in which the FI is to be established.	Art. 37 (2) (a)	yes
Analysis of the gap between supply and demand of financing and the identification of suboptimal investment situations.	Art. 37 (2) (a)	yes
Quantification of the investment (to the extent possible).	Art. 37 (2) (a)	yes
Identification of the quantitative and qualitative dimensions of the value added of the envisaged FI.	Art. 37 (2) (b)	yes
Comparison to the added value of alternative approaches.	Art. 37 (2) (b)	yes
Consistency of the envisaged FI with other forms of public intervention.	Art. 37 (2) (b)	yes
State aid implications of the envisaged FI.	Art. 37 (2) (b)	yes
Identification of additional public and private resources to be potentially raised by the envisaged FI and assessment of indicative timing of national co-financing and of additional contributions (mainly private).	Art. 37 (2) (c)	yes
Estimation of the leverage of the envisaged FI.	Art. 37 (2) (c)	yes
Assessment of the need for, and level of, preferential remuneration based on experience in relevant markets.	Art. 37 (2) (c)	yes
Collation of relevant available information on past experiences, particularly those that have been set up in the same country or region as the envisaged FI.	Art. 37 (2) (d)	yes



<b>Have you considered?</b>		
<b>Key checklist points</b>	<b>CPR Reference</b>	<b>(Yes/No)</b>
Identification of main success factors and/or pitfalls of these past experiences.	Art. 37 (2) (d)	yes
Using the collected information to enhance the performance of the envisaged FI (e.g. risk mitigation).	Art. 37 (2) (d)	yes
Definition of the level of detail for the proposed investment strategy (maintaining a certain degree of flexibility).	Art. 37 (2) (e)	yes
Definition of the scale and focus of the FI in line with the results of the market assessments and value added assessment.	Art. 37 (2) (e)	yes
Selection of the financial product to be offered and the target's final recipients.	Art. 37 (2) (e)	yes
Definition of the governance structure of the FI.	Art. 37 (2) (e)	yes
Selection of the most appropriate implementation arrangement and the envisaged combination of grant support.	Art. 37 (2) (e)	yes
Set up and quantification of the expected results of the envisaged FI by means of output indicators, result indicators and FI-performance indicators as appropriate.	Art. 37 (2) (f)	yes

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## 9 Feasibility study

### 9.1 Executive summary: this chapter gives a clear picture about the IFI – shortly describes the construction, target groups and goals

The proposed financial instrument aims at supporting investments of SMEs for energy efficiency and advanced energy technology adaption purposes. The main goal is to reach optimal operation with the lowest energy consumption possible and maximise the energy efficiency of buildings and facilities.

Based on the preliminary analysis and research carried out on the market, it was found that neither the eligible activities, nor the target group shall be severely limited. Consequently, the instrument aims at targeting any SME on the Hungarian market that is investing in energy efficiency increase. As the inadequate information flow and lack of “soft” knowledge has been found to be one of the main bottlenecks of the sector, the instrument will not only contain financial help, but also professional due diligence services for planning the potential investment.

For an efficient operation, the FI will be composed of two components. Component ‘A’ includes a thorough due diligence for approximately 300 businesses, ensuring nation-wide coverage by an independent expert consortium selected via open call. This activity will result in a detailed Energy Innovation Roadmap at each SME, including financial background and possibilities, and the feasibility study of the energy efficiency investment. Businesses examined will have the opportunity to apply for subsidized loans to implement the developments within the framework of Component ‘B’. The application shall be done through a simplified approval process, without further peer evaluation to avoid long waiting times between application and implementation.

Both components will be initially financed from the Operational Programme budget (with a possibility to attract private investment in the long run), through an Energy Fund established by the Ministry of Finance. For scheduling purposes and seamless operation, component ‘B’ will be constantly open until funds run out, 6 months after component ‘A’ is launched. As Component ‘A’ has the responsibility to find potential companies, the distribution strategy of its services is a key factor for success. Eligible companies can be found among the consortium’s professional network, among beneficiaries in currently open operation programmes, cross-border and transnational programmes, as well as companies registered in chambers or



associations. As there are similar several factors that can negatively affect the success of the FI, thorough risk management measures to avoid market failures and elaborate risk avoidance mechanisms were elaborated, with the following key risk factors:

- Stable financial background both for Component A and B is crucial for proper operation.
- As the auditor consortium shall include experts and businesses from different field of expertise, organisational frames, etc., significant attention shall be taken on the selection of the final consortium.
- The promotion and communication of the FI is crucial, as SMEs, who are already short on professional human resources may withdraw from participation if the message and offer of the FI is not well-defined.
- Based on estimations, around 3000 examined companies are expected. If Component 'A' fails to meet this indicator, it will hinder the success of Component 'B', while the search for eligible SMEs will require additional financing.
- While component 'A' is free of charge for companies, component 'B' requires own contribution. As SMEs often struggle with financial stability and creditability, their will to implement the proposed investment may be low.
- This study is built upon the assumption that the two components can be launched without delay, but due to administrative or financial reasons the scheduling may suffer delays. Such delays could lead to severe challenges, e.g. technological details of the Energy Innovation Roadmaps become obsolete; the financial background of businesses change in an unfavourable way etc.

In order to successfully measure the progress and the result of the FI, a complex monitoring system and mechanism shall be elaborated. During the market assessment it was found that businesses often lack the professional knowledge to properly measure the indicators and provide information about their performance, hence the proposed FI shall contain a monitoring and follow-up process for chosen businesses, possibly within Component 'A'. The monitoring system shall be able to continuously provide real time data on energy efficiency percentages reached among SMEs. This initiative may be hindered due to the nature of implemented investments, e.g. while the energy efficiency increase thanks to building insulation is easily measurable, the energy savings of a new machinery is more difficult to measure.





9.2 Technological considerations: this part will provide a detailed description about the IFI, how it will function, which main financial instruments provide the basis for it, a detailed description of the target group, the involved PA, etc.

### **Institutional framework:**

An Energy-Efficiency Fund will be established by the Ministry of Finance, operated using Operational Programme allocations. The Fund's financial capacity will be 29 billion HUF, from which 4 billion will be separated for Component 'A', while the remaining 25 billion will be allocated to Component 'B'. At first, Component 'A' will be run by a Consortium, chosen via open call for proposals. If the FI is proved to be sustainable and successful on the market, a permanent entity shall take over the due diligence services, e.g. a sort of Energy Agency.

### **Operation:**

During the market assessment it was found that combined instruments, including non-refundable elements are more viable. As SMEs often lack the professional knowledge needed to elaborate feasibility studies, cost-benefit analysis or business plans needed for loan application, the FI shall include expertise services as well. In order to ensure that only projects with a clear objective, suitable technical tools, energy-savings and energy-efficiency measures are funded, the IFI consists of two components.

### **Component 'A'**

Component 'A' will be operated via a consortium, selected through a call for proposal. Any business organization or newly established organization, registered in Hungary, having adequate experiences and references in the following fields:

- Energy audit
- Planning and implementation of energy efficiency investments
- Implementation and evaluation of state-supported credit facilities
- Business planning
- Expertise in State Aid regulations
- Planning, implementation and evaluation of Operational Programmes
- Expertise in the field of energy systems



are eligible to apply.

The submitted application forms shall be assessed by an independent board of experts. The resulting consortium's responsibility is to provide due diligence services to at least 300 companies (including start-ups), ensuring nation-wide coverage. The auditor consortium should avoid territorial concentration of the financial instrument.

The consortium must elaborate the proper methodology and framework for assessing businesses. Companies will obtain due diligence services as an indirect support; therefore, it will be perceived either as De Minimis Aid, or will fall under State Aid Regulation (in this case own contribution will be 50%).

The due diligence service shall contain an energy audit with an energy-efficiency plan and financial due diligence. The output of the service shall be a comprehensive Energy Innovation Roadmap, including all necessary developments. Eligible developments can be (but are not limited to) the followings:

- Building energetics modernisation;
- Purchase of new, energy efficient equipment;
- Increase of the share of renewable energy sources.

Based on preliminary estimates, the average loan/project would be 90-100 million HUF.

**Component 'B'** will only be available for businesses selected and examined during Component 'A'. Within this component, eligible businesses can implement the necessary energy efficiency developments revealed and planned in the Energy Innovation Roadmaps, using subsidized loans provided by the Energy Efficiency Fund. Applicants will only have to apply for funding through a simplified procedure without peer evaluation, therefore they can submit the loan application weeks after the submission of application. This step is crucial to ensure continuous investments and avoid long waiting periods between application and implementation.

In order to ensure the smooth and continuous implementation of the FI and to benefit from the revolving nature of funds, Component 'B' will be launched 6 months after the start of Component 'A'. After that, the components will run parallel until the financial sources are depleted. In order to keep the scheduling of the financial instruments, the consortium shall start the due diligence services immediately after contracting, while businesses shall be impelled to submit their loan application. Thanks to the parallel running, the accumulation of projects can be avoided during implementation.



The form of funding for Component “B” will be a subsidized loan, for a maximum of 10 years. Businesses shall have at least 10% of own contribution to the total amount of investment as a financial guarantee. The estimated minimum of the total cost of the investment is expected to be 50 million HUF, while the amount of the loan in each project is predicted to fall between 45 – 500 million HUF. These numbers shall be kept flexible, and shall be adjusted to the market needs and the elaborated Innovation Roadmaps. The duration of the implementation shall be decided based on the Innovation Roadmap, the investments shall be maintained for at least 3 years.

17. Table: Indicators

Indicator	Measurement unit
Estimated annual decrease of GHG emission	tons of CO <sub>2</sub> eq
Reduction in annual primary energy consumption of buildings	kWh/year
Reduction in primary energy consumption achieved by energy efficiency improvements	GJ/year
Annual energy saving	kWh/year

In order to properly measure the indicator values and ensure the sustainability of the project results, a proper **monitoring system** with follow-up activities is crucial. Businesses shall be taught how to measure the project results and how to interpret them. In this regard, the activities of Component ‘A’ are recommended to contain follow-up consultancy services after project implementation. Monitoring activities shall continuously gather data about the progress and energy efficiency level reached in supported companies, in order to assess the results and success of the FI both on project level and on programme level.

**Distribution:**

The distribution of the funds is a key element of the financial instrument. A wide network of the auditing consortium with companies in various markets is crucial. Potential beneficiary companies might be found among the beneficiaries of ongoing operation programmes, beneficiaries of transnational and cross-border programmes, businesses registered in different thematic chambers or association.



## 9.3 Existing marketplace: Examine the national markets of the IFI

The first finding during the market assessment was the significantly high number of SMEs on the Hungarian market; 718 000 (99% of all). The majority of them are located in county seats, or their agglomeration. The density of businesses in economically less-developed regions is significantly low. The services and product portfolio of SMEs in rural areas are limited, as the purchasing power and the size of the targeted market is small. This phenomenon causes an imbalance on the Hungarian market, forcing more businesses to downsize, or cancel operation resulting in a fractured and sensitive market. However, the high number of SMEs also carries a significant potential regarding energy efficiency investments, as businesses located in less developed regions are more likely to disregard energy efficiency measures.

For more focused analysis, the market was divided into two subcategories, based on the activities performed. Energy efficiency technology providers were found mainly in bigger cities. In most cases, the biggest challenge among them was to find financial resources for prototyping and market penetration. These businesses were either start-ups or small sized SMEs, in early development stage, hence carrying high risk for potential investors (banks and equity investors as well). In the second category, general SMEs were examined. The main finding was that businesses either aren't aware of options for energy efficiency increase, or are more focused on market growth, hence all investment is aiming at increasing net revenue.

During the assessment of both categories, two major barriers causing stagnation and failures have been identified: the inadequate information and knowledge, regarding the energy consumption of each business, the available financial instruments, and management skills. The second problem found was the financial instability, and the low level of creditability. Both businesses engaged in climate friendly technology provision and SMEs in any field have struggled with different elements of the above-mentioned barriers.

Due to the inadequate information flow, businesses aren't aware of the options available on the market for drawing in external resources, the visibility of direct EU funds (e.g. COSME, HORIZON) is significantly low among Hungarian businesses. The human capacities of such SMEs are also insufficient to elaborate application forms, business plans or cost-benefit analysis before any investment. These factors must be taken into account when planning any financial instruments for SMEs.



Based on the examination of the ex-ante assessment of currently existing financial instruments within the Economic Development and Innovation Operate Programme the followings can be stated:

- The options to draw in external additional sources is limited for SMEs. The creditability of SMEs also hinders the success of financial instruments, as companies often don't have enough own contribution.
- On the other hand, in particular small businesses would rather not take neither long-term investment loans, nor short-term loans.

During the assessment of currently available financial instruments, it was found that the waiting time between the application for funding and the starting of the project, the abundance of administrative tasks and requirements and the limited eligible activity options are all discouraging factors within the private sector. The currently available non-repayable funding for SMEs also decreases the attractiveness and competitiveness of financial instruments. In the previous programming period, the interest towards combined products were rather high, thanks to the higher percentage of non-refundable elements, and the wide range of eligible activities. It was found that eligible actions shall be kept as diverse as possible, while administrative and reporting tasks shall be reduced to be competitive on the market. As it was stated above, SMEs are often lack knowledge on existing options, hence an external third party is needed to draw the businesses attention towards possible solutions.

When proposing possible solutions, the competitiveness of equity-type instruments on the domestic market was also examined. It was found that SMEs are not interested in such options, as they don't see them relevant. Hence the viable option should be based on a loan-type of instrument.

When assessing potential additional resources to be attracted and draw in, the following options were discovered:

- ESCO model: it is based on the energy savings reached within an energy efficiency project of a company and guarantees savings for a set period of time in exchange for payment from the energy cost savings.
- Green bond: a bond issued by private banks specifically earmarked to be used for climate and environmental projects aiming at pollution prevention, energy efficiency, clean transportation etc.
- Community finance: in the last years, community finance has emerged. It means that a group of individuals are jointly financing energy related investments.



During the market assessment similar financial instruments were analysed as a competition analysis. There are a number of preferential financing instruments available on the market with similar State aid objectives. The most important subsidized loan is Funding for Growth Scheme (FGS) launched by the Hungarian National Bank (HNB) in April 2013. The first two pillars of the three-pillar Scheme aimed to support small and medium-sized enterprises in accessing forint denominated loans and to strengthen financial stability.

Within the 2014-2020 programming period under the EDOP several financial instruments are available for SMEs with different objectives, however it was found that supported loans are not available for the targeted SMEs for energy efficiency related investments. Moreover, since EDOP is not available in Central Hungary, where the SME density is the highest, several potential businesses have limited access to EU funds (the Competitive Central Hungary Programme offers some similar instruments than EDOP, and transnational, cross-border resources are also available, but usually for specific investment priorities). As SMEs often withdraw from taking a loan due to high interest rates, supported loans are expected to be attractive on the market. When assessing SMEs, only a slight increase, rather a stagnation was observed regarding market growth. This can be caused by the insufficient financial resources to boost growth, or by the purchasing limit of the targeted market segment. Either way, if increasing the net revenues is hindered, businesses tend to look for options to decrease their operating costs. Energy efficiency investments are a rather common solution; however, investment costs may rise high, and have long-term return. Based on these findings, a possibly high interest towards the proposed FI is foreseen.

The existing financial instruments can either be utilised for general growth generating investments (e.g. Central Bank – 'Funding for Growth' scheme) or for very specified activities (e.g. solar panels). While both can attract numerous of SMEs, there is a market gap regarding investments on process optimisation. The aim of the proposed FI is to fill in this gap and provide expertise services to ensure the success and compliance of the investments.

In order to understand the needs and limits of potential future beneficiaries, two workshops have been organised, one for stakeholders from the beneficiary side, and one for stakeholders from the supporter side. During these meetings the proposed FI has been modified and adjusted according to the inputs of participants. Key recommendations were the following:

- In order to ensure long-term sustainability of the proposed FI, component 'A' shall be run by an Energy Agency, with permanent expert pool, rather than a



onetime consortium. However, considering that the financial instrument will first operate as a pilot project, to assess its competitiveness and ability to satisfy the needs of the market, it shall not be institutionalised until proven successful.

- EU funded projects are often focusing on the implementation more than on sustainability, hence the monitoring activities, and follow-up processes often fail to measure the success of said projects. Moreover, SMEs in some cases don't have the skills and knowledge to correctly measure the progress of the project, and the indicators. Therefore, it is crucial to elaborate a complex monitoring system including follow-up activities, to ensure that project results are measured and monitored correctly, and data on the progress is continuously updated and available.
- Nation-wide coverage in Component 'A' may be easier to reach via establishing regional centres as due diligence service providers.
- In order to have continuously updated data on the energy efficiency level reached thanks to the investments within Component 'B' not only a precise monitoring system is needed, but it is recommended to include such measures into the Energy Efficiency Roadmaps as well, e.g. with smart meters.
- As non-refundable grant options are likely to run out during the next 10 years, the focus shall be on the financial instruments to support SMEs. As SMEs are more likely to apply for grants, the goal and importance of the FI shall be communicated clearly to potential beneficiaries.

As the proposed financial instrument is to be deployed by SMEs for energy efficient investments and the source of funding are the Operational Programmes, there is no question if the aid is regarded as state aid and the provisions of the state aid rules apply. Since the setup of a new financial instrument must be in line with the detailed rules of the state aid legal base, an early assessment of the compatibility with state aid requirements is essential, if possible, during the market assessment period, to adjust the FI to the relevant regulatory framework. This is because the applicable state aid compatibility is relevant for the main parameters of the design of the FI.



## 9.4 Distribution strategy: detailed information about the distribution channel of the IFI

### 9.4.1 Participants of the communication

Communication is of the utmost importance to ensure the success of the financial instrument. Communication channels should be maintained between the following parties:

1. **Managing authority:** under the auspices of the EU's cohesion policy for 2014-20, a managing authority is responsible for the efficient management and implementation of an operational programme.

A managing authority may be a national ministry, a regional authority, a local council, or another public or private body that has been nominated and approved by a Member State. Managing authorities are expected to conduct their work in line with the principles of sound financial management. In Hungary the managing authority is the Ministry for Finance.

As far as the financial instrument is concerned, managing authority also responsible for creating the Energy Fund which finance the both Component A and B.

2. **Auditor consortium:** the organisation which contains the companies from different professional areas and implementing the audit process for small and medium enterprises.

3. **Participant enterprises:** companies which are subject of the energy efficiency audit and investment project.

#### **Communication relations between the parties are:**

- *managing authority – auditor consortium:* monitoring the potential beneficiaries at component A is crucial to establish component B according the existing needs of the participant small and medium enterprises;
- *auditor consortium – participant enterprises:* the nation-wide distribution of the opportunity given by the financial instruments is one of the tasks of the auditor consortium. As they are the primary information source for the participant enterprises it is important to have a communication plan and tools to fulfil its goals;
- *managing authority – participant enterprises:* eligibility and other legal, technical rules of the financial instrument should be clarified during the





implementation of the related projects, where the managing authority provide the knowledge background;

- *auditor consortium – experts involved in the audit process*: the audit process of component A needs complex expertise especially when the operating technology of the company is evaluated. Communicating with and coordinating a wide range of professionals can be challenging but well-established communication channels could make it manageable.

#### 9.4.2 Finding potential audited companies

The key element of the financial instrument's distribution strategy is the wide network of the auditing consortium with companies in various markets. Besides the personal contacts, potential audited companies may be found in the following areas:

1. Beneficiaries of the ongoing operation programmes (GINOP and KEHOP, website: [www.palyazat.gov.hu](http://www.palyazat.gov.hu));
2. Beneficiaries of cross-border projects like the Danube Region Strategy;
3. Beneficiaries of the Horizon 2020 programme;
4. Companies registered different thematic chambers;
5. Networks of professional associations (e.g. Association of Environmental Enterprises, Regional Innovation Agencies).

The auditor consortium should endeavour to find potential participant companies Hungary-wide, avoiding territorial concentration of the financial instrument.

#### 9.4.3 Communication panels

The communication strategy should build on the favourable offer of the two-component financial instruments which has the following elements:

- The involvement in component A is **free**;
- Participating in the audit process is **open for every SME** (including the Central-Hungarian region, which have had significantly smaller available fund from operational programmes);
- Companies may get an audit report – a **comprehensive Energy Innovation Roadmap**, including all necessary developments;
- The identified energy efficiency investment elements may get **targeted financial support**;



- The audit materials would be suitable for applying for component B – or other financial supports –, which **ease the administrative burden of the application process**;
- The contacts with professionals, project managers, members of the management authority may **cause additional advantages** for the company in the form of projects, development ideas, partnerships.

#### 9.4.4 Tools for distributing information

Suitable marketing tools should be used for advertising the financial instrument and informing the potential participants. Creating a recognisable appearance for the consortium is needed which should be manifested in a design – logo, uniform color use, graphics, fonts.

These elements of design should appear on various platforms:

- business cards;
- website;
- email templates;
- document templates;
- advertising materials and spaces;
- mandatory information element – project signposts, informative materials.
- Organising conferences for the purpose of consortium members shall meet the potential audit participants and inform them with the project details. Distribution channels could be an informative website, and appearing in thematic journals and magazines.

## 9.5 Risk management: identification of risks and proposed solutions

The financial instrument and its two components can be established efficiently only if the advantages, disadvantages, opportunities and risks are well described. Creating and maintaining a proper risk management is the key for reaching the desired output indicators of the two components.

The main risks associated with the financial instruments are related to information flow or the understanding, available resources of the company.

### 9.5.1 Risks related to creating the financial background of the financial instrument



Without stable financial background both Component A and B would not function properly, which not only hinders the operation of the auditor consortium but makes discourage companies to participate in the initiative. Any delay in the implementation of energy efficiency investment elements increase the chance for getting the technology and financial status of the company out-dated or the project unfeasible which jeopardise reaching the output indicators of the instrument.

**Risk management:** creating the energy fund – which serves as the stable financial source for the instrument – as soon as possible is recommended while ensuring the opportunity to increase its volume in the future.

### 9.5.2 Risks related to the established auditor consortium

Creating the auditor consortium is a complex task because of the differences in the field of expertise, organisational background, interest, time schedule. Moreover, implementing the two component needs efficient coordination between the auditor participants.

**Risk management:** creating a project founding document which records the detailed role, expected results, time and financial framework of each participant of the financial instrument. The document should be revised if the practice differs from its outlined plan. Regular workshops or meeting should be held for ensuring communication and monitoring the progress.

### 9.5.3 Risks related to the unpopularity of the financial instrument

Without a well-defined offer and message, small and medium enterprises, which have already suffering from the shortage of human capacity, may not have the will to participate in the process. Small number of audited/beneficiary companies not only hinders reaching the output indicators of the two components but with the extra effort to reach new ones are makes more expensive the whole process.

**Risk management:** the two-component financial instrument should be created with taking in consideration the existing experiences in same projects and the needs and fears of target beneficiaries. Preliminary interviews, meetings with the stakeholders are recommended.

### 9.5.4

### 9.5.5 Risks related to the unpopularity of component B



While component A is completely free, component B requires various conditions which the participant companies must face. Creditability or other financial requirements, the will to change the selected elements of the organisation, the operating technology may prove to be a great challenge. The financial instrument would only prove to successful if the sufficient number (estimation is 250) of companies could successfully apply for component B.

**Risk management:** preliminary analysis of the potential audited companies is needed which may help in selecting those which have the potential not only to finish the audit process but to take part in component B. On the other hand, the conditions of grant and loan providing should be flexible and accelerated.

#### 9.5.6 Risks related to the time delay between the two component elements

This study recommends to minimise the time delay between creating the two components to 6 months but due to administrative or financial reasons this may suffer significant delay. The delay could cause serious disadvantages for instance:

- the technological details of the audit report get out-dated – both the audited or the proposed technology;
- the financial situation of the company changes, the proposed implementation roadmap becomes infeasible;
- the leaders of the company may accomplish the proposed energy efficiency project without participating in component B;

**Risk management:** substantive preparation of the funding scheme is the key for the smooth implementation where a project funding document and its time to time monitoring is highly recommended.

#### 9.5.7 Technology related risks

The chosen financial instrument targets every small and medium enterprise in Hungary regardless their function area. Such funding opportunity without limitations could lead to implementing the audit processes at companies with diverse technology background. This circumstance may increase the need for involving additional experts in the creation of the audit report which makes the audit more expensive.



**Risk management:** it is advisable to limit the operational technology related audit element only for those whose energy consumption is reaching a certain level.

18. Table: Mitigation and prevention measure

Identified risk	Likelihood of occurrence	Rate of effect	Level of risk	Mitigation and prevention measures
<b>Unstable financial background</b>	medium	high	high	The preparation of the two components should be done thoroughly.
<b>Dysfunction of the auditor consortium</b>	low	high	medium	Carefully selected consortium members
<b>Small number of audited companies</b>	medium	medium	medium	Creating and implementing an effective distribution strategy
<b>Less attractive component B</b>	low	medium	low	The needs of the audited companies should be monitored before the creation of the Operational programme
<b>Time delay between the two components</b>	high	high	high	Constant cooperation between the management authority and the auditor consortium and careful programming of the operation programme
<b>Heterogeneous technologies are need to be audited</b>	high	low	medium	Limiting the operational technology related element by certain criteria

## 9.6 Schedule and timeline: timeframe of the implementation period

As the proposed FI shall be part of the Hungarian Operational Programmes, its timeframe must be coherent with the EU's programming period (2021-2027). Based on former experiences, delays in the launch of Operational Programmes as well as scheduling problems during implementation are rather frequent. The available timeframe for each project in some cases needs to be prolonged e.g. due to delays in the procurement processes. These occurring severely hindered the process of determining sufficient timeframes and scheduling for the proposed FI. Since the scheduling of each phase of the FI is more important than the launch of the programme, the feasibility study is based on the assumption that the instrument can be launched 6 months after the start of the programming period, in June 2021. To be able to meet the stated deadline, the programme preparation phase shall start in 2020, with the objective to thoroughly examine all possible cause of delays, and elaborate avoidance mechanisms. It is recommended, to set up a team of permanent staff for this purpose.

As a first step, the consortium for Component 'A' shall be chosen, via non-restricted open call. The call for proposals shall determine the most important framework conditions and requirements and shall be open for appr. 3 months. The proposed timeframe for open calls is 2021 June – August. As the set up of an eligible consortium requires significant amount of time, for quality applications, it is recommended to communicate and promote the FI 2-3 months prior the launch of Component 'A'.

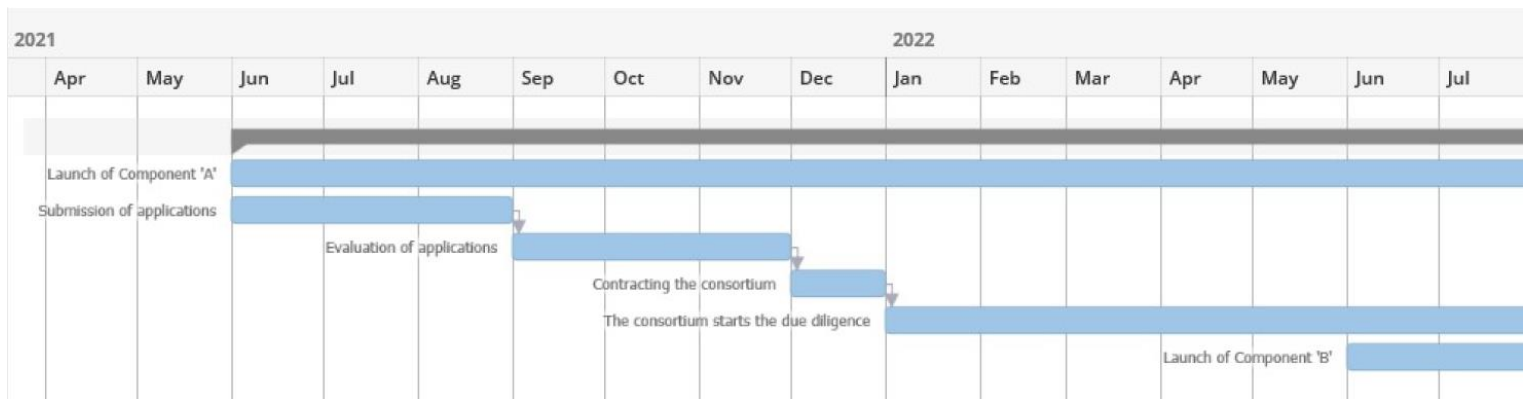
The evaluation of submitted proposals shall be done by a board of independent experts, and the final decision shall be made by December. The proposed timeframe (3 months) shall be sufficient for peer evaluation of proposals and shall follow a detailed set of evaluation criteria. With this scheduling, the contracting phase is recommended to not be longer than a month, so the due diligence services will be able to start no later than the beginning of 2022. It is expected that the application form submitted by applicant to the Component 'A' will already include the due diligence methodology, therefore no additional time will be needed between signing the contract and starting the services. Since there is no timeframe given to the consortium regarding the duration of each due diligence service, there is a risk that after 6 months, the number of examined businesses will be low. For continuous operation, and to reach the target number of examined SMEs (300), the consortium shall provide new Energy Innovation Roadmaps at least monthly. This requires a permanent designation and work, hence during the assessment of submitted



applications, potential consortium shall be assessed based on their ability to provide continuous, high-quality services on tight schedule.

For seamless operation and to eliminate long waiting periods within Component 'B', it shall be launched 6 months after due diligence services started and shall remain open until funds run out. In this regards the consortium shall detect and examine at least 2 businesses within the first months. With this approach, both components will run parallel, and companies examined within Component 'A' will have the ability to submit their loan applications as soon as possible, avoiding long wating period, as it was found to be one of the main reasons why potential beneficiaries withdraw from implementation. The assumption is, that with the parallel operation of both components, loan applications and project implementations will flow continuously.

4. Figure: Timeline



The available timeframe for project implementation shall be flexible, adjusted to the proposed required duration in the Energy Innovation Roadmaps elaborated by the consortium. As the FI has a revolving nature of funds, continuous investment efforts can be made.

Preliminary examinations showed that companies often struggle with appropriate monitoring and measuring methods, hence in order to retrieve representative data of the energy efficiency reached, services provided by the Consortium shall include the monitoring of project results as well. As the available time for implementation shall be determined based upon the Energy Efficiency Roadmaps, the possible project start, and end dates cannot be foreseen as of now. Due to this aspect, for monitoring purposes permanent staff is recommended. It is crucial to carry out a complex energy audit and measurement at each business for base values. This activity shall be carried out by the consortium, during the due diligence services.

The possibility of delays in particular within Component 'B' must be taken into account. As the instrument target a wide range of SMEs regardless of their field of





operation, geographical location or size, different communication and promotion methods are needed to attract potential SMEs. If the consortium fails to examine enough businesses, significant delays may occur in component 'B', as new investments won't be realised steadily, moreover it will require additional resources to draw in potential businesses. On the other hand, if the due diligence services are carried out on a tight schedule, proposed investments may be accumulated within Component 'B', causing prolonged waiting time between the application for loan and the start of the implementation. Such delays may not only cause the withdraw of businesses from realising the proposed investments, but also changes in the business can occur that hinders its capacity to implement developments (e.g. financial stability shrinks, the management structure changes etc.). As recently prices are rising in the construction industry and in the technological field, delays may result in higher investment prices, that might not be feasible due to the financial capacity of the SMEs.

As the proposed financial instrument has a revolving nature of funds, meaning the same financial resources can be reutilised over time through revolving cycles, both the impact and sustainability can be ensured. Consequently, to this reason, it may be possible, that after the programming period terminates, funds will still be available for the FI. As operational programme funds cannot be carried over to the next programming period, there might be a risk of losing some of the resources, which negatively affects the overall success of the FI. If the FI proves to be successful, it is recommended to set up an institutionalised, permanent consortium, possibly in a form of an Energy Agency.

As businesses will receive the requested amount of loan in a single payment, reporting periods within the project can be simplified and shortened, as payment claims won't be necessary. It is crucial to ensure that the implementation won't suffer significant delays. Since companies are given rather flexible framework conditions, there is a risk, that during implementation the scheduling of the developments will be rather loose. It is recommended to set up different measures and methods to urge or if necessary, sanction businesses behind on schedule.

## 9.7 Findings and recommendations: Break down into subsets of technological specifications, distribution and financials

Regarding to Component 'A' the following recommendations are formulated:

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- Selecting a consortium for financial and energy auditing is a key issue. It is important that the ToR describe the required competencies, the tasks to be performed and the required indicators in sufficient detail.
- The task of the consortium should be to reach and involve SMEs across the country.
- In order for Component 'A' to produce a sufficient number of funded projects, an effective screening method must be developed.
- The feasibility study prepared by the consortium shall be capable of automatically crossing over to Component B without any specific evaluation. This can save companies a significant amount of time (several months or even more than a year), making it easier to implement the planned development.
- In the case that the successful Component 'A' company does not intend to carry out the development on the basis of the feasibility study completed, it will be required to reimburse the amount of indirect aid granted to it.

Regarding to Component 'B' the following recommendations are formulated:

- The possibility of leveraging bank resources in the project should be created.
- Monitoring methodology, procedures and implementing organization are needed to verify the fulfillment of the indicators related to energy savings.
- In the medium term, it is appropriate to ensure the involvement of private capital in the financing of the Energy Fund.



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