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Green Deal for Buildings

Implementation Guidelines for Financial Sector, including Development Plans for Financial Platforms

Bratislava, Slovakia

Prague, Czechia

2024

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101032653

GreenDeal4Buildings

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APES ASOCIACE POSKYTOVATELŮ ENERGETICKÝCH SLUŽEB

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Guidelines for the Slovak Stakeholders

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Contents

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Executive Summary

The ambitious Paris climate agreement underlines the importance of energy efficiency and clean energy transition. Investing in energy efficiency and clean energy from renewable sources has proven to be one of the most cost-effective ways to support the transition to a low-carbon economy. Not only does this help the EU turn its climate ambitions into concrete action to combat climate change, but it also brings several significant benefits to European citizens and societies in terms of the environment, health, security of supply, lower energy bills, more jobs and sustainable growth.

To realise the full potential of energy efficiency and clean energy, public funding will not be enough and private funding will have to be unlocked. In this context, Member State policies should create more favourable investment conditions, promote demand for energy efficiency and make it easier for consumers to invest in it.

The Platform aims to stimulate discussion among the financial community, policy makers and clients (individuals or corporates) on energy efficiency and clean energy transition, to identify examples of good practices to reduce the riskiness of sustainable energy investments, successful approaches to scaling up financeable sustainable energy investment projects (including aggregation of smaller projects into larger units) and to facilitate their wider application in financial practice.

This platform will offer a comprehensive solution that would enable banks, financial intermediaries, energy service companies or other investment aggregators to deploy attractive sustainable energy finance products to many end beneficiaries in Slovakia, including regions that are poorly served by commercial funds.

The financial platform will include:

- A **Finance Lab**, which will be composed of stakeholders from sustainable energy investment and building renovation financing, administration and project development, and will implement standardisation in the evaluation of sustainable energy investment and building renovation projects during the first years, including tools to reduce transaction costs and aggregate projects into large units. It will also establish cooperation with the European Sustainable Energy Investment and Building Renewal Investor Platforms and develop a structured identification of potential projects or plans that could be financed by the solutions identified in the Finance Lab;
- A **legislative working group** that will work on a legal framework to incentivise further investment in sustainable energy and building renovation and new buildings with positive energy balance and smart energy solutions;
- A **Technical Assistance Coordination Group** that will promote the use of existing funding instruments, e.g. ELENA, JASPERS, eQuad, LAUNCH, PROPEL, etc.
- **Crowd-funding investment platform** for renewable energy and energy efficiency;
- **ESG workshop** to support the implementation of the EU taxonomy and the ***prevention of greenwashing***.

However, the area of legislation in Slovakia **lags financial innovation** in the western part of the European Union and the rest of the developed world. For the platform to fulfil its mission, regulators will need to modify existing legislation and draft new legislation to enable them:

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- **Blended financing** energy efficiency investments - on the one hand, public investment will not be sufficient and on the other hand, public investment should mobilise private investment in energy efficiency and not replace it;
- **Crowdfunding**, e.g. in the form of community projects, which requires effective legislation and independent oversight, such as in France, Italy and other countries where community-based clean renewable energy projects account for more than 40% of new investments;
- The **proliferation of innovative financing** that will bring cheaper solutions than no-purpose bank loans that are the most expensive financing on the market, and which, alongside personal savings, is the most common source of financing for housing renovation for residents and whose availability is severely limited for the highest income groups. This type of financing cannot get the building renovation market moving.

There will also need to be changes in government **policies** aimed, for example, at:

- A long-term strategy for the **renovation of buildings**;
- Alleviating energy poverty and protection of households under threat of energy poverty;
- A **fair transition** to clean energy;
- **Subsidies and support schemes** for energy efficiency and clean renewable energy projects;
- Supporting **rental and social housing.**

Section 2 of this deliverable summarises the measures that were agreed among the stakeholders and included in the Green Deal for Buildings. More detailed description is available in the text of the deal.

The revised Energy Performance of Buildings Directive (EPBD) (EU/2024/1275), adopted in May 2024, increases the energy performance requirements for new buildings. It requires all new residential and non-residential buildings to be zero-emission buildings (ZEBs) from 1 January 2028 for publicly owned buildings and from 1 January 2030 for all other new buildings. The existing building stock must be decarbonised and renovated to ZEB standard by 2050. The recast EPBD also foresees that deep renovation should transform buildings into zero-emission buildings after 2030.

When we reset the renovation counters on the numbers of renovations to zero-emission buildings, we will see exactly what the task before the government and the responsible agencies is. **Delaying the renovation of buildings makes their decarbonisation more and more expensive**. The more expensive it is, the greater the problems of financing it. To ensure that this decade is not another missed opportunity, a high pace of change is needed and, above all, a change of approach to the buildings sector, the construction industry and the transition to clean renewable energy.

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1. GD4B Project Overview

Decarbonisation of buildings, improving their energy efficiency and carbon neutral construction in the European Union are key tools to achieve carbon neutrality by 2050. Almost 75% of buildings in Europe are inefficient and it is predicted that over 80% of existing buildings will still be in use in 2050. Since the member states of the European Union have committed to switch to a low-carbon economy, the European Union presented the European Green Deal, where the initiative *Renovation Wave for Europe* was announced. This initiative primarily envisages an increase in the building renovation rate from the current 1% per year (with deep renovation it is only 0.2%) to 3%. The costs of this renovation will be high and far exceed the possibilities of Slovakia's public finances, including funds provided by the European Union through various programs. Therefore, a mobilization of private investment is essential for achieving a climate-neutral economy and specifically for achieving ambitious goals in building renovation, as well as for financing the relevant innovations in the construction sector.

The **Green Deal for Buildings** presented here reflects on all these needs and is the result of broad consultations with stakeholders. These consultations focus on stakeholder dialogue with the aim of identifying possible joint activities and measures that would lead to competitiveness in obtaining sustainable investments for Slovakia and the use of emerging opportunities by Slovak regions and Slovak business entities.

This dialogue took place in the framework of Roundtables, which are organized in the period from 31 March 2022 to 31 May 2024. The Deal consist of four roadmaps, which focus on:

- **residential buildings**, including apartment blocks and family houses, private and public, including social housing and rental housing for young families;
- **non-residential buildings**, including educational buildings (schools, universities), administrative buildings, commercial buildings, cultural and historical buildings, private and public, also owned by municipalities;
- **industrial buildings** – non-residential buildings that are not included in the previous points, with the exception of technological buildings that are part of measures to increase energy efficiency in industry;
- **city infrastructure and street lighting**, which is linked to the concepts and functions of smart buildings and smart cities.

The Green Deal for Buildings and Roadmaps focus on fulfilling the following strategic goals:

Strategic objective 1: Proposing a framework for increasing the energy efficiency of the use of public financial resources and the participation of private financial resources in the renovation of buildings, namely by:

- Developing proposals for legislative and non-legislative instruments to increase sustainable energy investments and increase the rate of renovation of buildings, including streamlining relevant policies;
- Developing and/or transferring successful strategies aimed at increasing private investments in energy efficiency, as well as increasing the efficiency of public resources spent on building renovation and increasing the share of renewable sources in the energy mix, including for decarbonizing the flexibility of energy systems;
- Assessing support measures to attract new private sources of financing for energy efficiency projects in Slovakia, such as green bonds and other debt underwriting instruments, investments by institutional investors (pension funds), financing by commercial funds

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investing in energy efficiency portfolios (Deutsche Bank, EEEF and others) , but also innovative financing, for example crowdfunding, which could finance projects focused on local communities and innovative energy efficiency projects that could be further replicated and scaled up;

- Analyzing the possibilities of extending the existing best practices implemented at the EU level and in Member States to Slovakia, specifically the results of the Horizon 2020 projects and best practice supported by the Sustainable Energy Investment Forum (SEIF) and the Working Group of Financial Institutions for Energy Efficiency (EEFIG).

Strategic goal 2: Proposing a framework for increasing the competitive ability of Slovakia, its regions and especially the construction sector to attract private investments in sustainable energy investments and renovation of buildings, namely by:

- Developing proposals for financial support for innovations in the construction sector aimed at:
    - Increasing labor productivity, safety on construction sites, for example, the industrialization of craft work with the use of robotization, automation and other cutting-edge innovations, which, among other things, lead to improved working conditions for employees, which makes it possible to attract young people with higher ambitions and talents to the industry;
    - Building an ecosystem for innovations that go beyond the capabilities of companies doing business on the Slovak market and represent a significant risk at the inception stage of implementing these innovations;
    - Increasing the quality of project preparation and construction works, including digitization in the construction sector;
- Developing proposals to increase the share of public investments in science and research, especially applied research, in the field of dual green and digital growth in the overall financing of science and research by the Government of the Slovak Republic, including operational programs;
- Analyzing the needs of vocational education to ensure the necessary skills, knowledge and competences for renovation of buildings, implementation of renewable energy sources and decarbonisation of flexibility in energy systems;
- Preparing proposals to support building owners and communities in cities and municipalities in renovation of buildings to the level of buildings with a positive energy balance and zero emission buildings, including community projects aimed at decarbonizing energy in buildings;
- Preparing proposals for using the experience of other Member States in promoting a common methodology for assessing building renovation projects and sustainable energy projects with the aim of creating larger packages of bankable projects that will increase the attractiveness of buildings renovation for private investors.

Strategic objective 3: Proposing measures aimed at reducing the risks of private investments in the renovation of buildings and sustainable energy projects, namely by:

- Supporting Slovakia's participation in initiatives supported by the European Commission and private investors aimed at exchanging data on implemented projects, financial operations to eliminate the risk of achieving the target energy efficiency of buildings, etc.;
- Transposition of relevant EEFIG recommendations;
- Proposing measures for the effective implementation of the EU taxonomy by financial institutions and the energy and construction sectors.

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The **main outputs** of the project are:

- **Permanent national roundtables** as stakeholder consultation bodies for the Green Deal for Buildings and its implementation;
- **Action plans and guidelines for implementation** and policy replication to implement actions to achieve the plans' objectives;
- **Concrete actions to achieve the objectives agreed** in the plans with technical specifications of the actions and guidelines.

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2. Objectives and measures for the financial sector

This section of the deliverable summarises the actions that have been agreed between stakeholders and included in the Green Deal for Buildings. A detailed description is available in the main text of the agreement (D4.3-4.6).

2.1 Common measures aimed at specific financing aspects to achieve strategic objective 1 of the Green Deal for Buildings

Action a.1: National sustainability financing strategy

Objective: Adopting the national strategy with broad stakeholder support.

Description: This new financial ecosystem includes both public and private financing. For Slovakia to succeed in this transformation, it is essential to develop a comprehensive strategy at national level that builds on these activities and, following the example of some EU Member States, to implement measures that ensure a shift of public and private funding to areas that are critical for this transformation. This funding must ensure the full cycle from research and development of innovations, education, support for the implementation of these innovations in critical sectors (e.g. energy, construction, new industries focused on climate-neutral economic activities), as well as in society as a whole, ensuring the necessary social innovation and adaptation of society while ensuring equitable transformation and social inclusion.

Action a.2: Platform for financing sustainable energy investments and building renovation

Objective: Increase the competitiveness of Slovakia and its regions in attracting sustainable energy investments.

Description: This platform will offer a comprehensive solution to enable banks, financial intermediaries, energy service companies or other investment aggregators to deploy attractive sustainable energy finance products to many end beneficiaries in Slovakia, including regions that are poorly served by commercial funds.

Action a.3: Financial blending (small PPP projects) for financing sustainable energy investments and building renovation

Objective: Increase the efficiency of the use of public funds to finance the renovation of buildings.

Description: These principles will lead to a standardised procurement process and contractual arrangements for both EPC and PPP projects. EPC contracts can become an attractive alternative to energy savings for existing public buildings. In the long term, this standardisation is expected to contribute to the improvement of the infrastructure and the public buildings sector with the involvement of the private sector in a sustainable way. For the private sector, the infrastructure and public buildings sector will provide more predictable, inspiring and attractive investments.

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Measure a.5: Promoting participatory financing of community projects

Objective: Adoption of necessary legislation, establishment of independent oversight, number and volume of community projects financed by participatory finance (crowdfunding).

Description: Participatory financing in the form of community projects is ideal for financing clean energy transition projects due to its advantages, complementing projects financed by traditional banking products. Citizen and local government participation in renewable energy transition projects has already practically demonstrated significant added value in the form of greater acceptance of renewable energy by residents and greater access to additional private capital, leading to more consumer choice and greater citizen participation in the clean energy transition. As these are community-based projects, citizens are thus able to directly decide on the priorities of these projects and, once completed, are the direct beneficiaries of the associated benefits. And, with the right legislation in place, they can directly oversee their progress thanks to the high level of transparency.

Action a.10: Developing financial innovations to secure the necessary investments in building renovation

Objective: Increase in in-depth building renovation projects.

Description: The EU and Member States should "join the wave of renovation of public and private buildings". We are facing a climate emergency that requires achieving a significant renovation of the building stock to the level of zero-emission buildings and active energy hubs (i.e., buildings that have a positive energy balance and can store and supplying electricity to the grid). Investments in a clean energy building stock can support the transition to a low-carbon economy in Slovakia and move the decarbonisation of the economy to the desired levels by 2050. Therefore, there is a need for the development and implementation of financial innovations for financing building renovation to complement existing consumer loans (earmarked and non-earmarked) and building loans linked to building savings, which are the only or mostly available forms of financing in Slovakia. It is also highly advisable to replicate successful approaches to financing building renovation in other EU Member States such as Belgium, France, the Netherlands, Germany and Italy.

2.2 Common measures aimed at specific financing aspects to achieve Strategic Objective 3 of the Green Deal for Buildings

Action c.2: Implement the EEFIG Underwriting Toolkit

Objective: Increasing the number of financial institutions and financial intermediaries implementing the EEFIG Underwriting Toolkit and the volume of sustainable energy investments underwritten by the EEFIG Underwriting Toolkit.

Description: The measure aims to implement the underwriting toolkit developed by EEFIG (EEFIG Underwriting Toolkit) in cooperation with the European Commission to correctly label investments in building renovation and other sustainable energy investments and, in synergy with other instruments (e.g. DEEP), to reduce the level of risk of these

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investments. While the focus is on value and risk assessment, it also includes additional material on potential market size, financing methods and project life cycle to provide a more complete picture and build capacity within financial institutions.

Action c.3: Improve the flow of information on the energy performance of buildings aimed at more efficient pricing of building renovation financing products

Objective: Increase the number of financial institutions and financial intermediaries using energy performance data in the pricing of financial products.

Description: EEFIG has proposed to the European Commission to change the EU regulatory framework to ensure that lenders identify, record and maintain the actual energy performance of their buildings' collateral, including the assessment of energy efficiency as a risk factor in their IRB PD and LGD models. The availability and, in the Slovak reality, the existence of data on the energy performance of collateral is one of the main factors determining the scope of the analysis that financial institutions and stakeholders, including EEFIG, can perform. Analyses based on improved collection data by financial institutions will facilitate a better understanding of risks in financial institutions. To accomplish all the above, the Roundtable recommends supporting and funding the creation and increased availability of standardized information on thermal performance of both residential and commercial buildings so that banks can better understand all these relationships. Easy access to national energy certificate/digital building passport data is essential, and an interoperable interface with national energy certificate/digital building passport repositories would be beneficial for accessing information from these sources.

Action c.5: Standardising processes for the approval of building renovation projects or a common methodology for the approval of project financing

Objective: Increasing the rate of renovation of residential and non-residential buildings.

Description: Standardisation can include labelling schemes, project evaluation methodologies and risk assessment tools, standardised legal and financial asset structures (loans, guarantees, energy performance contracts, etc.). As investment funds gain more experience in energy efficiency markets, they reduce the minimum project size and encourage aggregation of smaller projects with increased success as project developers understand what is required to meet the risk appetite and constraints of these financiers. If public funds were made available to support securitization vehicles, this could also improve the criteria and allow aggregation of longer paybacks.

2.3 Specific measures aimed at specific financing aspects for the renovation of residential buildings

Measure bd.3: Plurality in financing housing and its renovation

Objectives: Increase the number of available forms of financing and the share of non-bank sources in housing finance.

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Description: The measure aims to ensure a legislative plurality of housing finance, which would include rules for financial blending of different sources of finance with public finance, different financial instruments (e.g. financial forfaiting, structured PPP programme for guaranteed energy services, joint public-private fund based on debt underwriting, one-stop financing, soft loans, etc.) and tax instruments (e.g. transferable tax credits and local tax funding).

3. Other innovative financial instruments to explore

The general opinions of the financial sector on the current situation can be summarised as following:

- Current investment spending in energy efficiency is insufficient to meet the EU's investment needs and targets.
- Public subsidies can create an economic incentive for energy modernisation projects, but their level will never be sufficient to become the main driver of large-scale investments, especially under the current budgetary constraints. However, it is clear that subsidies represent the most popular type of instrument provided in the country.
- The energy efficiency market is complex and many actors, such as homeowners, tenants, small businesses or others not eligible for subsidies or soft loans, are not satisfied with the current mechanisms. The problem that needs to be addressed is the lack of available funding.
- Due to the long repayment period, it is difficult to set attractive loan terms for in-depth renovation. Commercial banks are only beginning to take energy efficiency parameters and energy costs into account when underwriting mortgages, which puts renovations that deliver higher energy savings at a disadvantage.
- It is difficult to accurately predict savings, which leads to uncertainty about returns, and can be a barrier to diversifying existing sources of capital and attracting private interest.

One of the opinions that resonated at the roundtables, but which did not translate into proposals for action, was that current financial incentive systems and structures may not be sufficient to massively scale up energy efficiency investments. In order to increase investment in energy saving potential, it is probably necessary to start considering the use of some other innovative financial instruments that have been successfully used around the world but are so far difficult to transfer to the local market environment.

Examples of innovative instruments include public loans/credits using guarantee mechanisms, financing through one-stop shops, a more comprehensive Energy Service Assurance (ESA) model to complement the established EPC model, Property Assessed Clean Energy (PACE), transferable tax credits, co-operative or crowdfunding financing, tax/account based financing and green mortgages.

It is clear that there are innovative financing solutions that have been used successfully in other EU countries or in the US that should be analysed and developed into a form that could be presented for professional discussion in the local market. Discussions should be held on these innovative solutions [1], [2]:

Public loan or loan guarantee mechanisms

Public loans or loan instruments in the form of guarantees are financial products subsidised by public

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budgets that offer project owners lower interest rates and/or extended repayment periods compared to market rates. These loans help to reduce the repayment burden and can be aligned with energy saving initiatives. They can be provided by public institutions (e.g. national banks) or commercial intermediaries (commercial banks). A financial instrument should be created to support this mechanism. Typically, a public authority will provide a guarantee and/or co-financing to mitigate the commercial risks associated with a loan portfolio managed by a financial intermediary. This mechanism is already in use, but in different forms and under different support programmes. A more appropriate alternative would be the creation of a single guarantee mechanism, similar to the InvestEU mechanism but at national level.

Financing through one-stop-shops

In this model, public authorities encourage the creation of finance companies (public or public-private) that offer technical support and integrated financing to project owners. These companies refinance complex renovation projects through third-party loans. The terms of the loan are tailored to the energy savings that the renovation will bring or the household's ability to repay the loan.

This model relies on the payback period of energy renovation, which can be long, especially for large projects. It is therefore only sustainable in the case of long-term contracts and/or public subsidies to partially cover investment costs. These finance companies are mainly financed through bank loans. As the scale or duration of renovation projects increases, public support will be needed.

Energy Service Agreement (ESA)

The Energy Service Agreement (ESA) allows building owners to implement energy efficiency measures without upfront costs, but with reimbursement for actual energy savings achieved. Similar to Energy Performance Contracts (EPCs), ESA payments are based on energy savings, not energy production.

Under an ESA, the project developer enters into a contract with an energy service company (ESCO) that installs and maintains energy efficiency measures and provides capital investment. The building owner then pays for the saved energy as a service. This off-balance sheet financing can be advantageous for tax purposes or if existing mortgages have restrictive terms. ESAs are similar to EPC contracts where the ESCO finances the project and the owner pays back a portion of the verified savings, but the ESA transfers long-term responsibility for service availability to the ESCO, including management, maintenance, and operations [2]. The following diagram illustrates the difference between EPC and ESA models:

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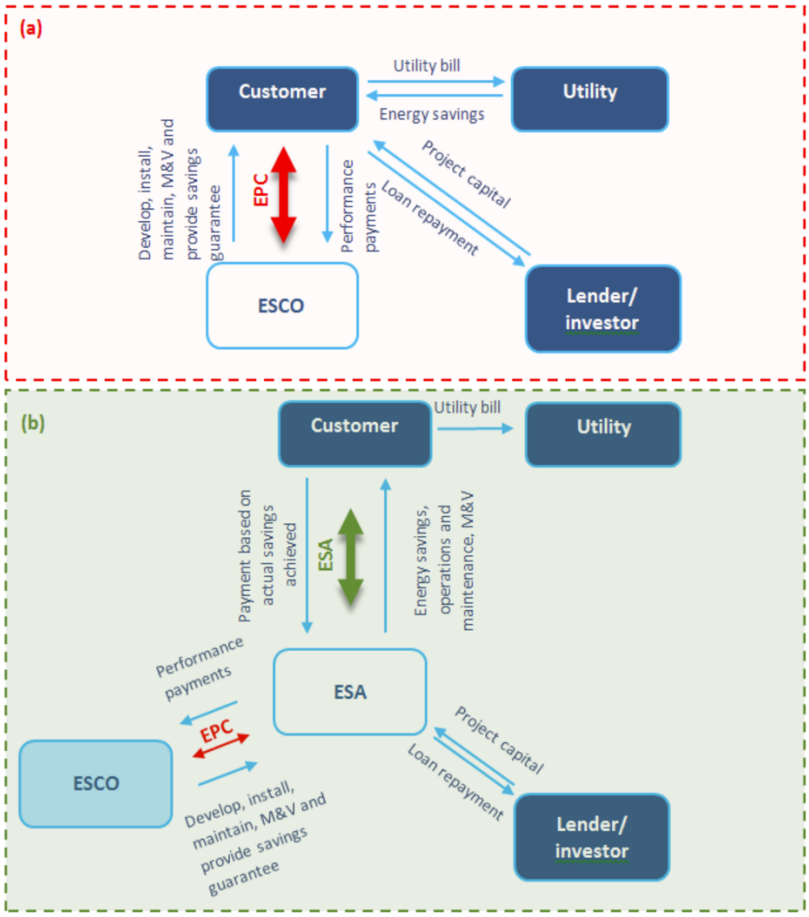

Source: Financing the energy renovation of buildings, MARINA ECONOMIDOU, PAOLO BERTOLDI, 2014.

Transferable tax break (Super EcoBonus)

Under this model, building owners who invest in renovation can receive tax breaks provided they meet certain energy efficiency criteria. The break is proportional to the cost of the renovation and can be deducted from taxes in instalments over a number of years. The system also allows for the transfer of this tax break to a third party. For example, the Italian Super Ecobonus scheme offers a tax break of 110% of the renovation costs spread over five equal instalments over five tax years. The tax break can be claimed as a discount on the renovation invoice issued to the contractor or can be transferred to a financial intermediary for prefinancing purposes. In the case of a transfer to a financial intermediary, the taxpayer must first pay the renovation costs, while a direct claim on the contractor does not require a down payment. Contractors may also transfer the tax break to a financial intermediary for refinancing purposes. The budget for the tax break is set each year by the public authority. A financial instrument may be required to mobilise private capital to cover the risks associated with the transfer of the tax break.

Cooperative or crowdfunding financing

This type of financing allows individuals to finance projects and capitalise on the capital invested. These projects can be local and community-based or based on pooled investment funds supporting different projects. There are basically two main models: i) the cooperative model and ii) the crowdfunding model.

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Both models are becoming popular as an alternative to traditional banking and are attracting interest at EU level to support investment in the energy sector. An example is the CitizEE project supported by Horizon 2020, which aims to create integrated citizen financing schemes through investment platforms for the energy renovation of buildings. To increase the mobilisation of private capital from citizens, public authorities may need to develop financial instruments to cover investment risks (e.g. equity or credit risk). This usually involves setting up a guarantee fund. This model is very replicable.

Green or energy-efficient mortgages

Green or energy-efficient mortgages are new financial products that are being developed across Europe to channel private capital into the renovation of buildings. Banks offer discounted interest rates and/or additional mortgage financing in exchange for measurable improvements in the energy efficiency of the building. This initiative, supported by Horizon 2020, involves banks, mortgage lenders and energy efficiency stakeholders.

The key principles are:

1. **Increasing the value of the property:** improving the energy performance of the property increases its value, thereby reducing the risk to the lender's equity.
2. **Lower default risk:** borrowers are less likely to default due to higher disposable income from reduced utility bills, which reduces the lender's credit risk.

To increase the mobilisation of private capital, public authorities may need to create financial instruments, such as guarantee funds, to cover investment risks. This model can be implemented at regional level through cooperation with financial market participants.

Financing from the collection of local taxes (PACE)

Tax increment financing uses local taxes to collect payments from citizens and businesses for energy efficiency renovations financed by private investors. These investors provide the initial funding for the renovations and repay them over up to 20 years through **increased property taxes**. Originally developed in the US as the **Property Assessed Clean Energy (PACE)** financing programme, it finances energy efficiency, renewable energy and water conservation projects, covering up to 100% of the cost. A similar programme called **EuroPACE** is being developed in Europe and has been launched in major cities. Unlike in the US, EuroPACE covers **all local taxes** related to the ownership or use of a building, such as garbage collection fees. Belgium is one of the favourable countries for the introduction of PACE. A financial instrument is needed to support this model, which often involves the issuance of bonds by public authorities on the capital market. This model relies on a long payback period for energy renovation, which is only sustainable with long-term contracts and/or public subsidies to cover part of the investment. This model is highly replicable and structuring the financial instrument on a programme-wide basis can lead to cost savings.

Incremental property taxation

Property taxes are in place in many EU countries. They can be distinguished from other taxes such as taxes on sales transactions. These taxes are based on the property value of each building. There is a need for a regulation that would include the **level of energy efficiency of the building** in the property tax paid by the owner. The level of efficiency must be established on the basis of the EPC label of the building so that the property tax is linked to the energy performance of the building.

This will encourage property owners to invest in energy efficiency measures in energy-intensive

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buildings and reduce their tax burden. Bürger (2013) proposes two options for implementing the adjustment: a revenue-neutral approach, in which the tax level is increased for inefficient buildings and reduced for efficient buildings, and a revenue-generating approach, in which taxes are increased only for inefficient buildings. The revenue from the latter approach should be a source for a public support fund to incentivise groups with low creditworthiness or limited capital to invest. These should include low-income households and small and medium-sized enterprises. This efficiency adjustment should apply to annual property taxes paid by building owners as well as to taxes paid on property purchases. In the case of property purchases, the new owner must have a period of time (e.g., 2 years after the transaction) before the additional tax payment associated with the building's effectiveness is due. This allows the new owner to carry out renovation work and improve the building's energy rating during this period.

4. Origin of the financial platform

Discussions on the financial platform have already taken place during the first stakeholder meetings in 2021 and 2022. A first set of recommendations and plans for the development of the financial platform were presented during several meetings of the Working Group on Finance and discussed with stakeholders.

After several working group meetings, roundtables and workshops that were part of the GD4B project in 2022 and 2023, the idea of a financial platform was revised based on input from discussions with stakeholders from the finance, construction and energy efficiency sectors. As a result, this proposal for an energy efficiency financing platform is a continuation of the GD4B project.

The proposed measures on the financial sector and the innovative financial instruments mentioned above will require further discussion with government departments and institutions on concrete steps to implement them. Without a unified approach from the private sector, it will be very difficult to maintain the momentum of the current activities implemented under the GD4B project. A financial platform could be an appropriate solution to build on the outputs of the GD4B project.

5. Objectives of the financial platform

The aim of the financial platform is to regularly monitor and support the implementation of the proposed measures. By maintaining a discussion on how to implement or possibly calibrate them, the financial platform can maintain the momentum gained from regular roundtables and working groups. A broader group of stakeholders and involved experts and institutions will be the counterpart of the government and its working groups to address the proposed measures of the GD4B project and their implementation.

In addition to the above, the financial platform can also be used to discuss and develop proposals and support other comprehensive solutions to enable banks, financial intermediaries, investors, energy service companies or other aggregators to introduce attractive sustainable energy financing products.

The financial platform will facilitate the financing of sustainable energy investments through:

- Regular exchange of information on new energy solutions, capital deployment needs and the use of potentially new financing structures;
- Encouraging wider availability of private financing from global investors, ESCOs, capital markets (through PPPs - energy savings as a service or green bonds) and other private financial sources;

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- Investment support from the new InvestEU instrument;
- Proposals for risk-sharing mechanisms to mitigate the risks of sustainable building portfolios and make lending terms more attractive to final beneficiaries;
- Provision of technical expertise and assistance in the implementation of loan programmes developed in cooperation with the European Investment Advisory Centre (programmes such as ELENA, JASPERS, fi-compass or their successors under the new programming period of the European Commission).

6. Involvement in successful European initiatives

The financial platform will build on or directly engage with successful European initiatives. These include, but are not limited to, initiatives such as:

- **The European Energy Efficiency Financing Alliance and national hubs** (almost all EU Member States are involved);

  The aim of the coalition is to create a favourable market environment for energy efficiency investments and increase the private financing needed for energy efficiency to help achieve the EU's 2030 and 2050 energy and climate goals.

  Its activities include:

  - Facilitating the implementation of financial instruments and energy efficiency schemes under EU funding programmes,
  - Promoting these programmes to encourage or facilitate further private investment in energy efficiency projects.

  The Coalition is divided into three levels:

  - General Assembly - The General Assembly includes high-level representatives of all Coalition members and is chaired by the Commission.
  - Expert Groups - These groups include highly qualified experts from the Coalition's membership base who are appointed to address specific requests emanating from the Coalition.
  - National Hubs - The Slovak Hub, led by the Ministry of Economy, represents the Coalition in Slovakia. Promotion of the EU taxonomy - participation in commenting on technical criteria, social taxonomy, ESG framework, ethical rules and the fight against greenwashing in the financial sector, etc.

  The Secretariat, which will be based in Brussels, supports the work of the Coalition by providing administrative and technical support to the structure. It also helps to improve the understanding of the risks and benefits of energy efficiency investments by maintaining and expanding the DEEP database, which is an integral tool of the Coalition.

  The Platform will work closely with a group of stakeholders and a group of financial institutions that will be active within the Slovak Hub.

- **EU taxonomy** – participation in commenting on technical criteria, social taxonomy, ESG framework, ethical rules and the fight against greenwashing in the financial sector, etc.
- Among successful European initiatives, the financial platform would evaluate the replication and use of existing tools such as the **eQuad** platform (www.eu.jouleassets.com) for:

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- Underwriting investments in sustainable energy buildings, which was developed in cooperation with the Energy Efficiency Financial Institutions Group (EEFIG) at the initiative of the EC;
- Replication of successful green mortgage initiatives;
- Use of the protocols of the unified ICPE methodology for the assessment of building renovation projects; or
- Aggregation into large units while reducing transaction costs.

7. Plan for further development of the financial platform

Inspired by other successful initiatives, the financial platform will aim to launch several activities based on the general agreement of the members, such as:

- A "**Finance Lab**" involving parties from the field of financing, management and development of sustainable energy and building renovation projects, which would establish a standardised assessment of sustainable energy and building renovation investment projects in the first years. It would also establish cooperation with European investor platforms in the field of sustainable energy and building renovation investments;
- **Legislative working** group to promote further investment in sustainable energy and the renovation of buildings and construction of new buildings with a positive energy balance and smart energy solutions;
- **Technical assistance coordination group** to support the use of existing funding instruments such as ELENA, JASPERS, LAUNCH, PROPEL, eQuad and others;
- **Investment platform for crowdfunding** of renewable energy and energy efficiency;
- **ESG workshops/discussions** to support the implementation of the EU taxonomy and prevent greenwashing.

8. Proposed members

Interest in participating in the financial platform will come from a variety of sectors and will include:

- Financial institutions and capital providers (PSS, VÚB, Tatra Banka, ČSOB, Unicredit, Raiffeisenbank etc.);
- Investors in sustainable energy investments, including global investors, institutional investors, funds, etc;
- ESCO companies;
- Advisers and consultants (PwC, EY, Deloitte, KPMG, etc.);
- Regions and municipalities (ZMOS, ÚMS, SK8 and their member towns and municipalities);
- organisations and associations dedicated to developing, implementing and promoting investment in sustainable energy (ZSPS, APZ, RUZ, etc.).

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9. Operation

The financial platform will operate on the basis of the following principles:

- It will be an **informal association** under the auspices of the Round Table, based on a memorandum of understanding that will be open to other members.
- It will meet **2-4 times a year** and will operate according to general rules agreed by the founding members. The working groups will meet more frequently according to need and focus.
- It will be the basis for dedicated projects **aimed at scaling up sustainable investments and financial products** and financial innovations for financing sustainable investments under European Commission and EIB programmes.
- It will build on the **success of the GD4B roundtables** and reinforce the momentum gained from other activities to promote sustainable financing for renovating buildings.
- Financial platforms with mutual cooperation, information exchange and support will be established in the Czech Republic and Slovakia.

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Sources

[1] Combining public and private financing to increase investment in energy efficient building renovation | National roundtable on energy efficiency financing in Belgium| Workshop 4

[2] Financing energy renovation of buildings, Marina Economidou, Paolo Bertoldi, 2014

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Guidelines for the Czech Stakeholders

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Content

Deliverable information

According to the Grant Agreement, the objective of deliverable D5.2 is to prepare implementation guidelines for the financial sector, including development plans for financial platforms within the SF4SB. These guidelines and roadmaps reflect the results of the discussions in WP3 and WP4 on roadmaps and action plans and are prepared in collaboration with financial sector stakeholders.

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Executive Summary

The GD4B project is a strategic initiative focusing on the key role of the financial sector in promoting energy savings and sustainability in the Czech Republic and Slovakia. The aim of *Deliverable D5.2 Implementation Guidelines for Financial Sector, including Development Plans for Financial Platforms under SF4SB Initiative* is to develop and implement financial mechanisms that enable banks, investors and other financial institutions to actively participate in financing energy efficiency projects in buildings and infrastructure. These projects include both residential, commercial and industrial buildings, as well as urban infrastructure, including smart lighting and energy efficient technologies. A key element of the project is to minimise risks for investors, thereby ensuring the long-term sustainability and profitability of investments.

One of the main outcomes of the GD4B project towards the financial sector in the Czech Republic is the adoption of the **National Sustainable Finance Strategy**, which would set out a framework for long-term support for sustainable investments. The strategy is to include clear targets for financial sector engagement, with a key component being working with financial institutions to develop instruments such as green bonds and loans dedicated to financing sustainable projects. The **National Action Plan on Sustainable Finance** for 2025-2030 is intended to provide concrete measures for the implementation of the strategy, both at the level of investment and at the level of regulatory and policy instruments.

The GD4B project also paid close attention to the development of **innovative financial instruments** that would facilitate access to energy saving finance for a wide range of actors, from households to SMEs to large corporations. Such instruments include **public loans with guarantee mechanisms** that reduce the risk associated with investments, and **one-stop shops** that provide comprehensive services ranging from technical advice to project financing. In addition, the project promotes widely used **Energy Performance Contracting** (EPCs) and brings to attention more complex **Energy Service Agreements** (ESAs), two models that allow investors and property owners to finance energy efficiency measures based on the energy savings achieved.

An important aspect of the project is the establishment of a **Finance platform** that will serve as a platform and a **tool for long-term coordination and cooperation** between the public and private sectors. The Financial platform would enable the sharing of information and experience between financial institutions, investors and governmental authorities, while supporting the **creation of new financial products and financing models**. The platform will also track the implementation of the proposed measures and monitor progress in financing energy savings and sustainability.

The Finance platform should focus on inventing new financial instruments and models that can be transferred from other European markets and adapted to local conditions. It could also build on other successful European initiatives that have played a key role in increasing energy efficiency investments in other European countries and aim to share best practices and create standards for financing sustainable projects.

The GD4B project encompasses a comprehensive approach to promoting energy efficiency and sustainable finance, with the financial sector playing a key role in driving the necessary investments for the future of a sustainable economy.

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We proposed the following measures in relation to financial sector:

Section 2.1 Financing sustainability

Measure 1: National Sustainable Finance Strategy
Measure 2: National Action Plan on Sustainable Finance for the period 2025 to 2030
Measure 3: Coordination Group and Advisory Group on Sustainable Finance
Measure 4: Update of the mandate of the Government Council for Sustainable Development
Measure 5: Comparative study of the institutional system for sustainability and reform proposal

Section 2.4: Enhancing the effectiveness of financial instruments

Measure 11: Increase the use of financial instruments under the operational instruments
Measure 12: Optimise and streamline the administrative process (grants and fin. instruments)
Measure 14: Increase the capitalisation of the NRB
Measure 15: Cooperation with commercial banks
Measure 16: Support policies of other ministries
Measure 17: New products, building on the ELENA programme
Measure 52: Development of PPA contracts

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1. GD4B project overview

The overall objective of the project is to contribute to the implementation of the **Smart Finance for Smart Buildings Initiative** (**SF4SB**) in Slovakia and the Czech Republic by **directly motivating** stakeholders through actions agreed and endorsed by the **national roundtables** and elaborated in **roadmaps, action plans** and **guidelines** aimed at developing the three pillars that underpin the initiative.

The three pillars of the SF4SB initiative will be assigned to our dedicated working groups:

- **Pillar I: Increasing the efficiency of public financing of energy efficiency projects**
  > Assigned to the Expert Group on Efficient Financing for Energy Efficiency.
- **Pillar II: Pooling and helping to develop a pipeline of fundable projects**
  > Allocated to the Increasing Investment in Energy Efficiency group; and
- **Pillar III: Reducing the risk of portfolios of energy efficiency projects**
  > Assigned to the Expert Group Increasing value and investor confidence.

The main outputs of the project will be:

- **Permanent national roundtables** as stakeholder consultation bodies in the implementation of the SF4SB initiative.
- **Plans for the implementation** of the SF4SB initiative;
- **Action plans** and **guidelines for implementation and replication** of policy to implement actions to achieve the plans' objectives**.**
- **Specific actions** to achieve the objectives agreed in the roadmaps with technical specifications of the actions and guidance for their replication.
- Guidance for the financial sector - **including plans for the development of financial platforms** in the implementation of SF4SB.

The **Roadmaps** and **Action Plans** will cover the period up to 2030 and will propose short, medium and long-term actions aimed at:

- **Residential buildings,** including multi-family and single-family dwellings, both private and public, including social housing and rental housing for young families.
- **Non-residential buildings,** including educational buildings (schools, universities), office buildings, commercial buildings, cultural and historical buildings, both private and public, including municipally owned buildings.
- **Industrial buildings** - non-residential buildings not included in the previous points, except for process buildings that are part of energy efficiency measures in industry.
- **City infrastructure** and street lighting that are linked to smart building and smart city concepts and functions.

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2. Objectives and measures for the financial sector

Roundtable participants agreed on **priority objectives** for facilitating financing for energy savings, which **from a financing perspective** include the need to identify new more efficient financial instruments and more advanced project structures, to increase the efficiency of existing financial instruments and to reduce the risks of projects and financial structures through the use of supporting financial instruments.

Following the roundtables, the Working Group on Financing has identified and developed a number of **concrete measures** that relate directly to financing, financial products or the financial sector. Of the actions listed in Deliverable D2.4, the following are particularly relevant:

Section 2.1 Financing sustainability

The following measures aim at the development of a single **National Sustainable Finance Strategy** as an overall framework that defines clear objectives, rules, obligations and expectations both towards the financial sector and capital markets and towards potential applicants for future project finance. The strategy developed at national level should promote the existence of sustainable finance products such as green bonds, and provide a clear framework for reporting and transparency in line with European rules. Early involvement of the financial sector in the development of such a strategy is important. These measures were proposed and discussed at Round Table 1 (National Sustainable Finance Strategy).

Measure 1: National Sustainable Finance Strategy

Goal: Adoption of the National Sustainable Finance Strategy (approx. 50-60 pages) and accompanying report.

Description: For the success of this economic transformation towards sustainability, it is crucial that individual EU Member States, including the Czech Republic, develop their own strategies at national level to support the shift of funding to sustainable areas. These strategies should also include research, innovation development, education and the implementation of new technologies in key sectors such as energy and construction. It is essential to involve all stakeholders and establish effective frameworks for the coordination, implementation and monitoring of these strategies to ensure a fair and inclusive transformation of society.

Measure 2: National Action Plan on Sustainable Finance for the period 2025 to 2030

Goal: Adoption of the National Action Plan for Sustainable Finance

Description: Formulation of concrete actions and action plans for the implementation of the National Sustainable Finance Strategy 2030, including hard and soft actions with this typology:

1. **Investment:** actions consisting of capital investment;
2. **Policies, regulations & transactions:** actions consisting of concepts, plans, strategies, policies, plans, regulations, ordinances, resolutions, contracts, agreements, guidelines, procedural rules, technical standards, methodologies, manuals, templates, etc;
3. **Capacity building: the** action of imparting, improving and/or maintaining skills and knowledge to individuals in a specific area, including relevant tools, aids, equipment or other resources needed to perform tasks more or less competently;

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4. **Stakeholder engagement:** relationship-building actions involving individuals or organisations that may be affected by the entity's activities or may influence the implementation of its objectives, e.g. workshops, platforms, knowledge hubs, participatory events, innovation and alignment projects, etc.

5. **Data management:** actions involving the acquisition, validation, storage, protection and processing of required internal and external data, including HW&SW and supporting equipment to ensure its accessibility, reliability, timeliness, immediate availability, etc.

6. **Studies, analyses & monitoring:** actions involving surveys, measurements, studies, analyses, assessments, or observation or monitoring of some relevant aspect;

7. **Financing:** actions involving measures to provide financing and/or funds for the implementation of actions, such as support programmes, financing and support instruments (plans, instruments, schemes, bond issues, loans, guarantees, etc.), etc.

Measure 3: Coordination group and advisory group on Sustainable finance

Goal: Institutionalize the Sustainable Finance Platform and transform it into a coordination group and advisory thematic groups, one of which should focus on buildings.

Description: In mid-2023, the Ministry of Finance established the National Platform on Sustainable Finance as an informal format for ad hoc information and discussion of issues related to sustainability finance, consisting in part of:

(a) selected ministries and state institutions and

(b) selected associations and actors from the private sector of local governments.

The Czech Platform for Sustainable Finance should be responsible for coordinating activities in the field of sustainability finance, transferring and disseminating trends, innovations, good practices and news from the international and EU level and monitoring the implementation of tasks arising from relevant strategic documents (see Action 1 and Action 2 above).

It is advisable to institutionalize this platform and to intensify its activities (including regular meetings and the introduction of internal rules) so that it not only brings information and consensus on the development of the sustainability finance ecosystem in the Czech Republic, but also contributes to addressing the technical issues of its development. It should have a coordination part (coordination group) and a technical part (advisory groups) on selected topics, similar to the EU Sustainable Finance Platform[1] . One of these advisory groups should focus on buildings.

Advisory groups should issue opinions and recommendations and integrate the perspectives of different disciplines and stakeholders across four key stakeholder groups: the real economy, the financial sector, central government and local authorities.

[1] See https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance_en.

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Measure 4: Update the mandate of the Government Council for Sustainable Development

Goal: To update the mandate of the Government Council for Sustainable Development

Description: The main tasks of the Government Council for Sustainable Development (GCSD) are to find consensus on long-term priorities and to assess key trends in sustainable development at national and global levels. It is also the guarantor of the development of key strategic documents on sustainable development for the Czech Republic. In the context of the elaboration of the National Sustainability Financing Strategy, the mandate of the SDC will need to be updated to fit into the overall new systemic approach to addressing sustainability in the Czech Republic.

Measure 5: Comparative study of the institutional sustainability system and reform proposal

Goal: Preparation of a comparative study of the institutional system of sustainability

Description: Preparation of a comparative study analysing different models of institutional arrangements for sustainability in other EU member states and elaboration of a reform proposal for a permanent national institutional arrangement for sustainability in EU terms in the Competence Act. This study should also identify the long-term roles that are proposed to be temporarily assigned to the Coordination Group (Recommendation 3) and the Advisory Group (Recommendation 4), as well as the long-term roles of the RCU (Recommendation 5), including the restructuring of its expert committees and working groups.

Section 2.4: Increasing the effectiveness of financial instruments

The following measures are aimed at increasing the influence and effectiveness of financial instruments, reducing red tape, and strengthening the coordination of government departments and institutions. This also includes strengthening the role of the **Czech National Development Bank** (**NRB**) along the lines of the German development bank KfW. These measures were proposed and discussed at Round Table 3 (Role of the NRB in financing energy savings) and Round Table 7 (PPA projects).

Measure 11: Increase the use of financial instruments under operational instruments

Goal: Increase the number of effective financial instruments in the calls of the main operational programmes financing energy savings

Description: To expand the use of financial instruments in operational and national programmes, in calls for energy saving projects (especially OP ENV, OP TAK, NP ENV, NZU). Financial instrument means capital investment, credit, guarantee and other risk sharing instruments. The use of financial instruments is reinforced in the Structural Funds rules in the programming period 2021-2027.

The potential for the use of financial instruments is considerable. For their successful implementation:

1) Combine financial instruments with existing subsidy calls (e.g. OPEP, OP TAK). The subsidies themselves, if set up in this way, are always more advantageous for the beneficiaries than the financial instrument.
2) Ensure the high quality of supported projects through accessible technical support and an emphasis on their sustainability and cost-effectiveness.
3) Expand public-private cooperation as much as possible.

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4) Collaborate with financial institutions and experts across strategic sectors (energy, transport, science and research...).

Activity proposal:

1) Analysis of current financial instruments used in operational programmes
2) Analysis of financial instruments available on the market (including analysis of financial instruments used in other grant programmes)
3) Proposal for the implementation of new financial instruments in operational programmes
4) Working group on proposals
5) Finalisation of the design
6) Implementation of new financial instruments in operational programmes

Measure 12: Optimise and streamline the administrative process (grants and financial instruments)

Goal: To increase the number of effective financial instruments in the calls of the main operational programmes financing energy savings and in particular to increase the number of applications and the volume of funds used

Description: The administrative process covers a range of activities from the investor's own decision-making or approval process and the preparation of all required documentation in accordance with the conditions of funding (from a grant programme or other source) to the administration of project implementation. Another burden may be the monitoring of the project during its sustainability period. Unsuccessful projects are often due to failure to meet formal requirements, so the administrative process to obtain the necessary financing for energy efficient buildings should be as simple and efficient as possible. Criteria for optimisation can be the reduction of the time for assessing and approving funding applications, the level of standardisation and systematisation of administrative processes, the simplicity and clarity of forms, the optimality of the application approval process, etc.

Measure 13: Communication of the measure to potential applicants

Goal: To improve awareness of the framework of financial instruments in the Czech Republic, the possibilities and conditions of individual financial instruments and thus increase the number of applications and the volume of funds used.

Description: Increasing awareness of the measures in place will contribute to more applications. Proper targeting of information on the new framework of financial instruments for energy savings, new opportunities and programmes will improve the orientation of applicants and better targeting of their applications. Communication will include a web portal with signposting to existing and new financial products, presentation workshops in each region for potential applicants and education in the form of leaflets.

Measure 14: Increase the capitalisation of the NRB (the Czech National Development Bank)

Goal: Increase of NRB's equity

Description: NRB's capital increase is a precursor to the implementation of its further development strategy, both in terms of products and business model. Today, NRB is financed almost exclusively through ministerial deposits. The capital increase will allow the Bank to expand this financing through financial market resources. The Bank can thus help ministries and government funds to significantly increase the capacity of support provided by ministries and

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government funds by involving financial market resources, e.g. by issuing its own bonds, and resources from cooperating commercial financial institutions, to the tune of hundreds of billions of kroner. However, this requires strengthening the Bank's lending capacity. Capitalisation can also be increased indirectly, e.g. through a state guarantee. The study will present concrete steps that will enable additional state support of at least CZK 100 billion to be implemented.

Measure 15: Cooperation with commercial banks

Goal: Increase the volume of commercial bank financing involved in the NRB's financial instruments

Description: Development of a model of cooperation between the NRB and commercial banks, following the model of foreign development finance institutions - e.g. EIB, EIF, KfW, SIH, BGK. NRB should then be able to develop a new branch of its business and support, the so-called intermediated products, i.e. intermediated loans and guarantees provided to clients (mainly SMEs but also large enterprises) not directly but through a network of cooperating commercial banks and leasing companies.

Measure 16: Support for policies of other ministries

Goal: Increase the number of products - financial instruments of the NRB, where the contracting authority is a ministry other than the MIT or MMR

Description: Creation of a product strategy of the NRB that will enable effective involvement of resources of other ministries and state funds - creation of a mutually agreed concept on the basis of an inter-ministerial working group led by the MoF or the NRB, which will present specific financial products that will support in particular decarbonisation and digitalisation of the Czech economy.

Measure 17: New products, building on the ELENA programme

Goal: To increase the number of new products - financial instruments of the NRB linked to the ELENA programme

Description: Development of new banking products by NRB to support the transition to a low-carbon economy through market-compliant financial instruments such as guarantees, soft loans and combinations thereof. It is important to create a mechanism to support as many energy saving projects in buildings and the construction of small-scale photovoltaics and heat pumps as possible. Branch networks of commercial banks should also be involved, as they have a much greater reach to the SME and large business client base than the NRB itself. Consideration could be given to the involvement of international financial institutions such as the EBRD (European Bank for Reconstruction and Development), which has similar schemes abroad under the name GEFF - this programme operates in 29 countries in Central and Eastern Europe and Central Asia. As for the ELENA programme, this is technical assistance for the preparation of energy efficiency projects. Support is provided by the European Investment Bank (EIB). The project should consider the involvement of other entities in ELENA besides the NRB, or the creation of a national ELENA programme under the auspices of the NRB, as newly allowed by the EIB Advisory Hub rules.

Measure 52: Development of PPA contracts

Goal: Increase the number of PPA contracts and the volume of renewable energy traded through PPAs (*Power-Purchase-Agreements*)

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Description: Development of a support scheme that will solve the basic problem of the Czech renewable electricity development - the lack of diversified renewable energy (RES). Development plans for the construction of new RES sources include in approximately more than 90% of cases photovoltaic sources, only a small share of wind or biogas. However, in the case of PV, there is a problem with its sale during peaks, when the spot price can go into negative territory (in the Czech Republic this happened for the first time on 1 April 2023). PPA contracts may be a solution for developers with a capacity of more than about 20 MWp[2] , but it is quite problematic to find a counterparty with a consumption curve that matches the production curve. This becomes a significant problem both for base load (minimum continuous electricity demand), for which other resources such as wind are not available, and for the liability for the deviation, which usually neither party wants to take.

The higher objective of the measure is to introduce specific legislative proposals that will significantly enable: (i) the development of wind power in the Czech Republic, and (ii) to provide state support to account for the deviation, which will benefit the customer - typically manufacturing companies. This will increase the stability of energy prices for large industrial consumers, reduce their carbon footprint in scope 2[3] and increase their competitiveness.

3. More innovative financial tools to explore

The general views of the financial sector on the current situation can be summarised as follows:

- Current investment spending in energy efficiency is insufficient to meet investment needs and EU targets.
- Public subsidies can create an economic incentive for energy modernisation projects, but their level will never be sufficient to be a major driver for large-scale investment, especially in cases of current fiscal budget constraints. However, it is clear that subsidies represent the most popular type of instrument provided in the country.
- The energy efficiency market is complex and many actors such as homeowners, tenants, small businesses or others who are not eligible for subsidies or soft loans are not satisfied with the current mechanisms. The lack of available financing is a problem that needs to be addressed.
- Due to the long payback period, it is difficult to set attractive loan terms for in-depth renovations. Commercial banks are only beginning to take energy efficiency parameters and energy costs into account when underwriting mortgages on a pilot basis, which puts renovations that deliver higher energy savings at a disadvantage.
- It is difficult to accurately predict savings, which leads to uncertainty about returns and can be a barrier to diversifying existing capital sources and attracting private interest.

[2] *A Power Purchase Agreement* (PPA) is a long-term (usually 10 to 15 years) contract between a renewable electricity generator and its customer. It guarantees the generator a pre-agreed (fixed) price for the electricity for a certain period of time, which allows the generator to receive a stable income and thus financing for their project. For the consumer, the PPA ensures long-term security of supply of green electricity and often a competitive price. Source: BusinessInfo.cz, https://www.businessinfo.cz/clanky/smlouvy-ppa-jsou-klicem-k-udrzitelne-energetice-prechazet-na-ne-budou-i-ceske-firmy/

[3] Scope 2 (indirect energy emissions) - emissions associated with the consumption of purchased energy (electricity, heat, steam or cooling) that are not directly generated by the business but are a consequence of the activities of the business. Source: https://ci2.co.cz/cs/vybrane-pojmy-v-oblasti-uhlikove-stopy

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One of the views that resonated at the roundtables, but which was not translated into draft measures, was that the current financial incentive systems and structures may not be sufficient to scale up energy efficiency investments on a mass scale. In order to increase investment in energy saving potential, it is probably necessary to start considering the use of some other innovative financial instruments that are successfully used worldwide but are still difficult to transfer to the local market environment.

Examples of innovative instruments include public loans/loans using guarantee mechanisms, financing through one-stop shops, a more comprehensive energy service assurance (ESA) model in addition to the established EPC model, property assessed clean energy (PACE), transferable tax credits, cooperative or crowdfunding financing, tax/account based financing and green mortgages.

It is clear that there are innovative financing solutions that have been successfully used in other EU countries or the USA that should be analysed and developed into a form that can be presented for professional debate in the local market. The following innovative solutions should be discussed [1], [2]:

Public borrowing or loan guarantee mechanisms

Public loans or credit instruments in the form of guarantees are financial products subsidised by public budgets that offer project owners lower interest rates and/or extended repayment periods compared to market rates. These loans help to reduce the repayment burden and can be aligned with energy saving initiatives. They can be provided by public institutions (e.g. national banks) or commercial intermediaries (commercial banks). A financial instrument should be created to support this mechanism. Typically, the public authority will provide a guarantee and/or co-financing to mitigate the commercial risks associated with the loan portfolio managed by the financial intermediary. This mechanism is already in use, but in different forms and under different support programmes. A preferable alternative would be to create a single guarantee mechanism, similar to InvestEU but at national level.

Financing through one-stop-shops

In this model, public authorities support the creation of finance companies (public or public-private) that offer both technical support and integrated financing to project owners. These companies pre-finance complex renovation projects through third-party loans. The terms of the loan are adapted to the energy savings that the renovation will bring or the household's ability to repay.

This model relies on the payback period of energy renovations, which can be long, especially for large projects. It is therefore only sustainable in the case of long-term contracts and/or public subsidies to partially cover investment costs. These finance companies are mainly financed through bank loans. As the scale or duration of renovation projects increases, public support will be necessary.

Energy Service Agreement (ESA)

An Energy Service Agreement (ESA) allows building owners to implement energy efficiency measures without upfront costs, but with reimbursement for actual energy savings achieved. Similar to Energy Performance Contracts (EPCs), ESA payments are based on energy savings, not energy production.

Under an ESA, the project implementer contracts an energy service company (ESCO) to install and maintain energy efficiency measures and provide capital investment. The building owner then pays for the saved energy as a service. This off-balance sheet financing can be advantageous for tax purposes or when existing mortgages have restrictive terms. ESAs are similar to EPC contracts, where

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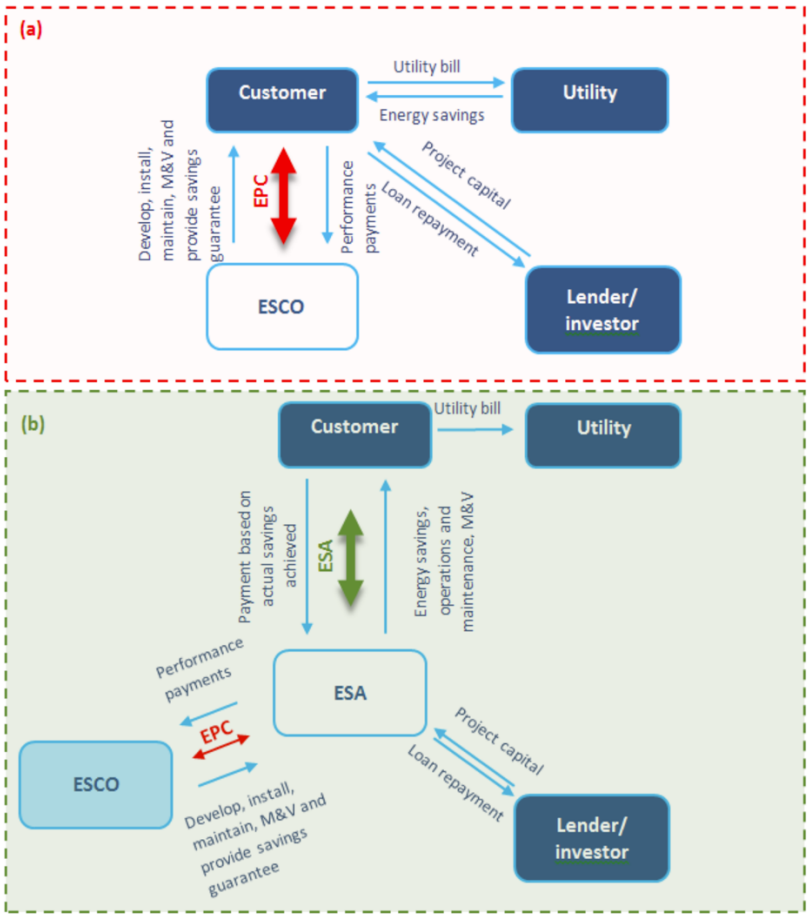
the ESCO finances the project and the owner pays back a portion of the verified savings, but the ESA transfers long-term responsibility for service availability to the ESCO, including management, maintenance, and operations [2]. The following diagram shows the difference between the EPC and ESA models:



Source: Financing energy renovation of buildings, MARINA ECONOMIDOU, PAOLO BERTOLDI, 2014.

Transferable tax credit (Supe EcoBonus)

Under this model, building owners who invest in renovations can receive tax relief provided they meet certain energy performance criteria. The allowance is proportional to the cost of the renovation and can be deducted from taxes in instalments over several years. The scheme also allows the transfer of this tax credit to a third party. For example, the Italian Super Ecobonus scheme offers a tax credit of 110 % of the renovation costs spread over five equal instalments over five fiscal years. The tax credit can be claimed as a discount on the renovation invoice issued to the contractor or can be transferred to a financial intermediary for prefinancing purposes. In the case of a transfer to a financial intermediary, the taxpayer must first pay the cost of the renovation, whereas a direct claim on the contractor does not require a down payment. Contractors may also transfer the tax credit to a financial intermediary for refinancing purposes. A tax credit budget is set each year by the public authority. A financial instrument may be needed to mobilise private capital to cover the risks associated with the transfer of the tax credit.

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Cooperative or crowdfunding financing

This type of financing allows individuals to finance projects and capitalise on the capital invested. These projects can be local and community-based or based on pooled investment funds supporting different projects. In principle, there are two main models: (i) the cooperative model and (ii) the crowdfunding model.

Both models are becoming popular as an alternative to traditional banking and are attracting interest at EU level to support investment in the energy sector. An example is the **CitizEE project,** supported by Horizon 2020, which aims to establish integrated citizen financing schemes through investment platforms for energy renovation of buildings. To increase the mobilisation of private capital from citizens, public authorities may need to develop financial instruments to cover investment risks (e.g. equity or credit risk). This usually involves setting up a guarantee fund. This model is highly replicable.

Green or energy-efficient mortgages

Green or energy-efficient mortgages are new banking products that are being developed across Europe. Their aim is to channel private capital into renovating buildings. Banks offer discounted interest rates and/or additional mortgage finance in exchange for measurable improvements in the energy performance of the building. This initiative, supported by Horizon 2020, involves banks, mortgage lenders and energy efficiency stakeholders.

The key principles are:

1. **Increase in property value:** improving the energy performance of a property increases its value, thereby reducing the lender's equity risk.
2. **Lower default risk:** borrowers are less likely to default due to higher disposable income from reduced utility bills, which reduces the lender's credit risk.

To increase the mobilisation of private capital, public authorities may need to create financial instruments, such as guarantee funds, to cover investment risks. This model can be implemented at regional level through cooperation with banking market participants.

Funding from local tax collection (PACE)

Tax increment financing uses local taxes to collect payments from citizens and businesses for energy efficiency upgrades financed by private investors. These investors provide the initial funds for the upgrades and are repaid over up to 20 years through the collection of **increased property taxes**. Originally developed in the US as the *Property Assessed Clean Energy financing* (**PACE) program**, it finances energy efficiency, renewable energy and water conservation projects, covering up to 100% of the cost. A similar programme called **EuroPACE** is being developed in Europe **and has been** launched in major cities. Unlike in the US, EuroPACE covers **all local taxes** related to the ownership or use of a building, such as garbage collection fees. Belgium is one of the favourable countries for the introduction of the PACE mechanism. A financial instrument is needed to support this model, which often involves a public authority issuing bonds on the capital market. The model relies on a long payback period for energy renovations, sustainable only with long-term contracts and/or public subsidies to cover part of the investment. This model is highly replicable and structuring the financing instrument on a programme-wide basis can lead to cost savings.

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Incremental property taxation

Property taxes are introduced in many EU Member States. They can be distinguished from other taxes such as taxes on sales transactions. These taxes are based on the property value of each building. There is a need to introduce a regulation that includes the **level of energy efficiency of the building** in the property tax paid by the owner**.** Efficiency levels must be created based on the EPC label of the building so that the property tax is linked to the energy performance of the building.

This will encourage property owners to invest in energy efficiency measures in energy-intensive buildings and reduce their tax burden. Bürger (2013) suggests two options for implementing the adjustment: a revenue-neutral approach, where the tax level is increased for inefficient buildings and decreased for efficient buildings, and a revenue-generating approach, where taxes are increased only for inefficient buildings. The revenue from the latter approach should be a source for a public support fund to incentivise groups with low creditworthiness or limited capital to invest. These should include low-income households and small and medium-sized enterprises. This efficiency adjustment should apply both to annual property taxes paid by building owners and to taxes paid on property purchases. In the case of a property purchase, the new owner must be given a certain amount of time (e.g., 2 years after the transaction) before the additional tax charge associated with the building's effectiveness is due. This allows the new owner to carry out renovation works in the interim and improve the energy label of the building.

4. Background of the financial platform

Discussions on the finance platform were already taking place during the first stakeholder meetings in 2021 and 2022. A first set of guidelines and plans for the development of the finance platform were presented during several meetings of the finance working group and discussed with stakeholders.

After several working group meetings, roundtables and workshops that were part of the GD4B project in 2022 and 2023, the idea of the financial platform was revised based on input from discussions with stakeholders from the finance, building and energy efficiency sectors. As a result, this proposal for the creation of an energy efficiency finance platform is a continuation of the GD4B project.

The above proposed measures relevant to the financial sector and the innovative financial instruments listed above will require further debate with government departments and institutions on the concrete steps for their implementation. Without a unified approach on the part of the private sector, it will be very difficult to maintain the momentum of the current activities implemented under the GD4B project. A financial platform could be the right solution to build on the outputs of GD4B.

5. Objectives of the financial platform

The aim of the financial platform is to monitor and support the implementation of the proposed measures on a regular basis. By maintaining the debate on how to implement or possibly calibrate them, the financial platform can maintain the momentum gained from regular roundtables and working groups. The broader group of interested experts and stakeholders and institutions will be the counterpart to the government and its working groups as they consider the proposed GD4B project measures and their implementation.

Beyond the above, the finance platform can equally serve to discuss, develop proposals and promote other comprehensive solutions to enable banks, financial intermediaries, investors, energy service companies or other aggregators to introduce attractive sustainable energy finance products.

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The financial platform will facilitate the financing of sustainable energy investments by:

- Serve to regularly exchange information on new energy solutions, capital deployment needs and the use of potentially new financing structures;
- Encourage wider availability of private financing from global investors, ESCOs, capital markets (through PPP - *energy saving as a service* or green bonds) and other private financial sources;
- Support investment from the new InvestEU instrument;
- Design risk-sharing mechanisms to mitigate the risks of sustainable building portfolios and make loan conditions more attractive for final beneficiaries;
- Provide technical expertise and assistance in the implementation of loan programmes developed in cooperation with the European Investment Advisory Centre (programmes such as ELENA, JASPERS, fi-compass or their successors under the European Commission's new programming period).

6. Involvement in successful European initiatives

The financial platform will build on successful European initiatives or engage directly with them. These include, but are not limited to, initiatives such as:

- **Sustainable Energy Investment Forum** (almost all EU Member States are involved);
- **Energy Efficiency Financial Institutions Group** (**EEFIG**), which:
  - created the DEEP open platform to increase energy efficiency investments in Europe through better sharing and transparent analysis of existing building and industrial projects;
  - in cooperation with the European Commission, has developed a *Framework for Underwriting Sustainable Energy Investment in Buildings*;
  - works to develop financing procedures, risk reduction for sustainable energy investments, energy efficiency even in areas not included in the project, such as energy efficiency in industry;
- Support **EU Taxonomy** - participate in commenting on technical criteria, social taxonomy, ESG framework, ethical rules and the fight against *greenwashing* in the financial sector, etc.
- Among successful European initiatives, the Finance Platform would evaluate the replication and use of existing tools such as the **eQuad platform** (www.eu.jouleassets.com):
  - for underwriting investments in sustainable energy buildings, which was developed in cooperation with the Energy Efficiency Financial Institutions Group (EEFIG) at the initiative of the EC;
  - replicating successful green mortgage initiatives;
  - the use of ICPE Uniform Methodology protocols for the assessment of building renovation projects; or
  - aggregation into large units while reducing transaction costs.

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7. Plan for further development of the financial platform

The financial platform will take inspiration from other successful initiatives and, based on the general agreement of the members, aim to launch several activities such as:

- **A "Finance Lab"** that would involve parties from sustainable energy and building renovation investment financing, administration and project development, and that would introduce standardisation in the evaluation of sustainable energy and building renovation investment projects in the first years. It would also establish cooperation with European investor platforms in the field of sustainable energy and building renovation investments;
- **A legislative working group** to promote further investment in sustainable energy and renovation of buildings and new buildings with a positive energy balance and smart energy solutions;
- **Technical Assistance Coordination Group** to support the use of existing funding instruments such as ELENA, JASPERS, LAUNCH, PROPEL, eQuad and others;
- **Investment platform for crowdfunding** renewable energy and energy efficiency;
- **ESG workshops/discussions** to support the implementation of the EU taxonomy and the prevention of *greenwashing*.

8. Proposed members

Interest in participating in the finance platform will come from a variety of sectors and will include:

- financial institutions and capital providers (ČSOB, Komerční banka, Česká spořitelna, Unicredit, Raiffeisenbank, etc.);
- investors in sustainable energy investments, including global investors, institutional investors, funds, etc;
- ESCO companies (ČEZ ESCO, ENESA, etc.);
- advisors and consultants (PwC, EY, Deloitte, KPMG, Grant Thornton, BDO, SEVEn - Energy Efficiency Center, etc.);
- regions and municipalities (SMOČR, Association of Regions, individual regions and statutory cities);
- organisations and associations dedicated to the preparation, implementation and promotion of sustainable energy investments (ARI, APES, SPS, CBCSD, CZGBC, etc.).

9. Platform functioning

The financial platform will operate on the basis of the following principles:

- will be **an informal association** under the auspices of the Roundtable, based on a Memorandum of Understanding that will be open to other members.
- will meet **2 to 4 times a year** and will act according to the general rules agreed by the founding members. The working groups will meet more frequently according to need and focus.

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- will be the basis for dedicated projects **aimed at scaling up sustainable investment and financial products** and financial innovation for financing sustainable investments under European Commission and EIB programmes.
- will build on the **success of the GD4B roundtables** and reinforce the momentum gained from other activities to promote sustainable financing for smart buildings.
- financial platforms will be established in the Czech Republic and Slovakia with mutual cooperation, information exchange and support.

Sources

[1] Combining public and private financing to increase investment in energy efficient building renovation | National Roundtable on Energy Efficiency Financing in Belgium | Workshop 4

[2] Financing energy renovation of buildings, Marina Economidou, Paolo Bertoldi, 2014

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