



D2.3 MARKET ANALYSIS ON FINANCIAL MODELS

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THE REPORT AT A GLANCE

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LIST OF ABBREVIATIONS AND ACRONYMS

CCF	Climate Change Fund
EBRD	European Bank for Reconstruction and Development
EE	energy efficiency
EIB	European Investment Bank
ELENA	European Local Energy Assistance
EnPC	Energy Performance Contracting
EPC	Energy Performance Certificate
ESCO	Energy Service Company
FoF	Fund of Funds
FZOEU	Environmental Protection and Energy Efficiency Fund, Croatia
GHG	greenhouse gases
HBOR	Croatian national bank for reconstruction and development
LTRS 2050	Long-term Renovation Strategy for 2050
MINGOR	Ministry of Economy and Sustainable Development, Croatia
MINT	Ministry of Tourism, Croatia
MKM	Ministry of Culture and Media, Croatia
MPGI	Ministry of Physical Planning, Construction and State Assets, Croatia
NAPEnU	National Energy Efficiency Action Plan, Croatia
NECP	National Energy and Climate Plan
NECP	National Energy and Climate Plan
NPOO	National Recovery and Resilience Plan Croatia, Croatia
NPRR	National Recovery and Resilience Plan
nZEB	Nearly Zero Energy Building
NZEB	Nearly Zero-Energy Buildings
OPKK	Operational programme Competitiveness and Cohesion, Croatia
PPP	public-private partnership
RES	renewable energy sources
RRP	Recovery and Resilience Plan

EXECUTIVE SUMMARY

The present deliverable captures the work the SMAFIN Expanded project team performed to collect information on financing models and incentives applicable to energy efficiency in buildings (public and private), SMEs, and tertiary sector buildings.

The report builds upon the legacy of the previous inventories performed under the SMAFIN project for Bulgaria, Croatia, Greece, and Romania, updating the information to reflect the current situation in those countries. Additionally, the report includes data for Slovenia, the new member of the SMAFIN Expanded project.

The process generated under this task is similar to the one in SMAFIN, with project partners reviewing the financing schemes, initiatives and projects active in their respective countries to assess schemes and instruments available at the EU level.

This first iteration of the D2.3 deliverable is based mainly on desk research, expert advice, and preliminary input collected during the first-round table events in Croatia, Greece, Romania, and Slovenia on June 15, 2024.

Further, the document will be updated to incorporate information from interviews conducted with stakeholders in the financing sector planned in each country regarding experience from the application of the various financial schemes. The approach will also feed into the knowledge-sharing dialogues during the Thematic Working Groups and the following editions of the Round Tables, with the ultimate target of identifying not only relevant best practices but also barriers hindering the greater leverage of private funds for energy efficiency investments. The final edition of the report will be ready by July 2026.

The structure of the present report includes an introductory chapter providing information on the main updates at the EU level and a brief review of the EU support and financial instruments for energy efficiency in the previous programming period, 2014-2020, as well as for the 2021-2027 period. This is followed by a general presentation of the market context update/overview to include EE investment needs and main barriers along with EEFIG recommendations for scaling up the demand and building up the capacity for successful financing practices to facilitate energy efficiency in buildings, SMEs and the tertiary sector.

Furthermore, the report provides market updates for each SMAFIN Expanded country, including specific national experience with the application of different financial schemes and various financial models assessing the barriers still influencing greater leverage of private funds for energy efficiency investments as well as lessons learned in overcoming them. As much information was available in the current project stage, the draft also includes the financial institutions' perspective as preliminary information to base the organisation of the planned dialogues in the following stages of the project. Information will continue to be incorporated in the report until its finalisation.

1. INTRODUCTION

Energy Efficiency remains the critical area of action in the EU's growth and recovery strategy (European Green Deal), with a recognised need for higher investments in energy efficiency in all sectors of the EU economy as the most sustainable pathway towards climate neutrality.¹

The revised Energy Efficiency Directive (EU/2023/1791) significantly raises the EU's ambition for energy efficiency. It establishes 'energy efficiency first' as a fundamental principle of EU energy policy, giving it legal standing for the first time. In practical terms, EU countries must consider energy efficiency in all relevant policies and significant investment decisions in the energy and non-energy sectors.

The EU continues to keep a structured dialogue with the finance industry to de-risk energy efficiency financing and make private investments more attractive, striving to set favourable framework conditions to ensure private financing contributions to investments in the broader context of the EU policy focus on Sustainable Finance and the development of the Strategy for Financing the Transition to a Sustainable Economy. The **European Energy Efficiency Financing Coalition** builds upon the results of the Energy Efficiency Financial Institutions Group (EEFIG) continuing to develop the dialogue platform for dialogue between the Commission, EU countries and financial institutions over the coming years to create a favourable market environment for energy efficiency investments and to facilitate the mobilisation of private financing for energy efficiency in support of the 2030 and 2050 EU energy and climate targets.

Recognising the challenges faced by public and private investors alike to take their energy efficiency projects from idea to implementation, the EU also puts forward a wide range of legal, technical and financial support for the mobilisation of large-scale projects with the ambition to maximise the impact of the public investments. Initiatives such as the Sustainable Energy Investment Forums (continued with the SMAFIN and SMAFIN EXP), the InvestEU Programme and its Advisory Hub, the single investment support mechanism, or the European Local Energy Assistance (ELENA) instrument implemented by the European Investment Bank (EIB) for the preparation of investment projects in energy efficiency, integrated renewable energy and sustainable transport in cities, are examples that currently impact the EE market development in the analysed countries.

At the same time, innovative approaches to financing energy efficiency investments are kept at the centre of the EU's energy efficiency policy, legislation, and funding. Projects were previously funded under the Horizon 2020 programme and continue to be supported by the LIFE programme 2021-2027- the Clean Energy Transition sub-programme (such as SMAFIN Expanded). Best practices such as guarantee facilities, one-stop shops for building renovation or energy performance contracts are promoted to further upscale and adapt to national contexts to address the shortcomings of the traditional financing products available on the market.

The elements above were considered for updating this market overview in the SMAFIN Expanded target countries, aiming to collect relevant information from direct experiences of using the different facilities made available by the EU in the national contexts.

¹ https://energy.ec.europa.eu/topics/energy-efficiency/financing_en

1.1. EU SUPPORT TO EE AND FINANCIAL INSTRUMENTS

1.1.1. PERIOD 2014-2020

During 2014-2020, the EU allocated approximately EUR 17.6 billion of its budget to climate and energy efficiency (EE) initiatives. These funds were primarily distributed through centrally managed programs and Cohesion Policy funds.

Despite the potential for financial instruments in the EE sector, only about 14% of EE funds were utilised through financial instruments, while most were allocated as grants.

1.1.2. PERIOD 2021-2027

The European Union's long-term budget **Multiannual Financial Framework 2021-2027 (MFF)**, combined with the **NextGenerationEU recovery** instrument, represents a significant financial commitment of **€2.018 trillion** in current ² prices (€1.8 trillion in 2018 prices).

This comprehensive response aims to address the economic and social repercussions of the COVID-19 pandemic while fostering a transition towards a modern and sustainable Europe.

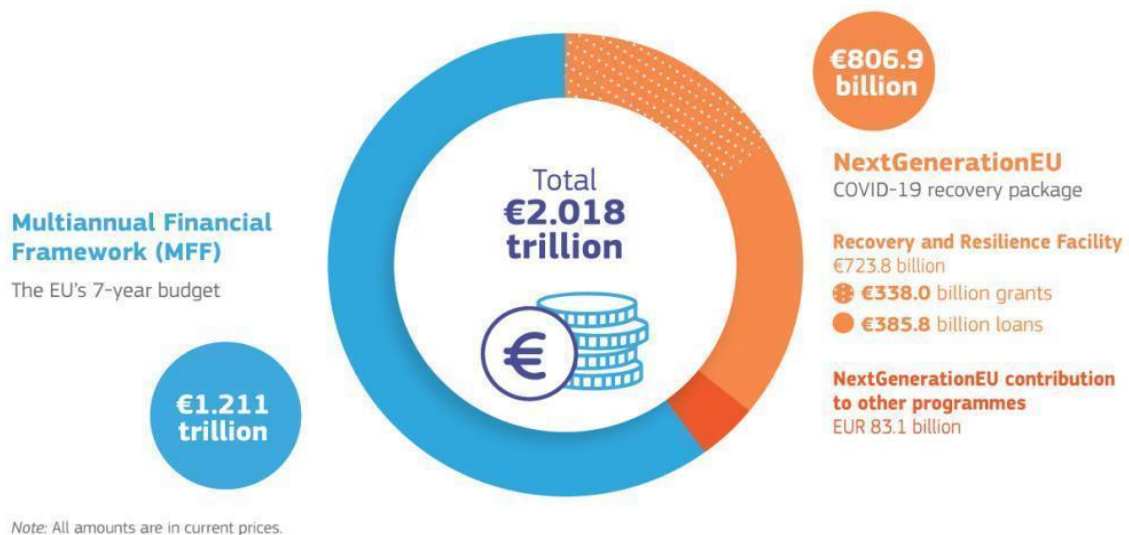


FIGURE 1: THE EU 2021-2027 LONG-TERM BUDGET. SOURCE: EC: WHAT'S NEW? - EUROPEAN COMMISSION (EUROPA.EU)

The package comprises two main components: the long-term budget, totalling €1.211 trillion in current prices (€1.074 trillion in 2018 prices), and the temporary recovery instrument, NextGenerationEU, amounting to €806.9 billion (€750 billion in 2018 prices)³. Notably, more than 50% of this funding will support initiatives aimed at modernising the EU through research, innovation, fair climate and digital transitions, as well as preparedness, recovery, and resilience.

² European Commission, Long-term budget, MMF 2021-2027. Available at: https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/whats-new_en

³ Publications Office of the European Union, Publication "The EU's 2021-2027 long-term budget and NextGenerationEU". Available at: [The EU's 2021-2027 long-term budget and NextGenerationEU - Publications Office of the EU \(europa.eu\)](https://publications.europa.eu/en/publication-detail/-/publication/11111111-1111-1111-1111-111111111111)

30% of the EU budget is earmarked for combating climate change, with additional focus on biodiversity protection and gender-related issues. Furthermore, 20% of NextGenerationEU funds will be dedicated to driving the digital transformation.

NextGenerationEU will be channelled through the EU's long-term budget, particularly in the initial years (2021-2023). The majority of these funds (€723.8 billion in current prices) will be allocated through the **Recovery and Resilience Facility (RRF)** program, supporting green and digital projects through grants (€338.0 billion) and loans (€385.8 billion).

The distribution of grants under the **RRF considers various factors such as GDP per capita**, unemployment levels, population, and the impact of the pandemic. EU countries seeking support must submit Recovery and Resilience Plans outlining their utilisation of funds, aligned with green and digital transition objectives. The plans undergo assessment by the Commission and approval by the European Council, with disbursements contingent on achieving agreed milestones and targets. Additionally, **the Just Transition Mechanism** will be crucial in supporting member states in transitioning to climate neutrality, with an endowment of EUR 17.5 billion allocated to the Just Transition Fund.

The **Modernisation Fund**, established to aid 13 lower-income EU Member States in upgrading energy systems and improving energy efficiency, receives funding from EU Emissions Trading System (EU ETS) auction revenues. With a total of €57 billion allocated from 2021 to 2030, assuming a €75/tCO₂ carbon price, the fund supports climate goals and the European Green Deal in beneficiary countries, helping them transition to greener economies. **Beneficiary Member States include Bulgaria, Czechia, Estonia, Greece, Croatia, Latvia, Lithuania, Hungary, Poland, Portugal, Romania, Slovenia, and Slovakia.** Financed by revenues from auctioning emission allowances under the EU Emissions Trading System (EU ETS), the fund catalyses green transitions in these nations. The fund's revenues are derived from various sources, including:

1. Auctioning of 2% of the total EU ETS allowances between 2021 and 2030.
2. Auctioning of 2.5% of the total EU ETS allowances between 2024 and 2030.
3. Transfers from Member States of EU ETS allowances allocated for solidarity, growth, interconnections, or distributed for free to electricity generators.

These funds, not counted as EU budget resources, can be used for co-financing EU programs⁴ Or Cohesion Policy funding.⁵

1.2. MARKET CONTEXT UPDATE/ OVERVIEW

1.2.1. EE INVESTMENT NEEDS AND MAIN BARRIERS

The fi-compass study⁶ on utilising financial instruments to bridge the investment gap in energy efficiency (EE) involved analysing the 27 National Energy and Climate Plans (NECP). This analysis provides a comprehensive summary of the EE investment requirements outlined by each Member State in their respective NECPs.

⁴ European Commission, Energy, Climate change, Environment, Energy Efficiency finding options. Available at: [Current funding \(europa.eu\)](https://ec.europa.eu/europa.eu/funding/europa.eu)

⁵ Buildings Performance Institute Europe (BPIE), Report on the evolution of the European regulatory framework for buildings efficiency: Available at: [rev6 SPIPA EU.pdf \(bpie.eu\)](https://rev6 SPIPA EU.pdf (bpie.eu))

⁶ EIB: The potential for investment in energy efficiency through financial instruments in the European Union, Final report June 2020: [The potential for investment in energy efficiency through financial instruments in the European Union - Executive summary | fi-compass](https://the potential for investment in energy efficiency through financial instruments in the European Union - Executive summary | fi-compass)

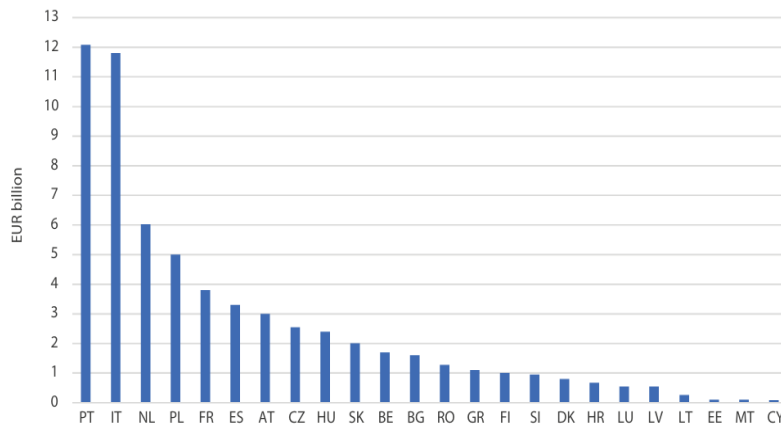


FIGURE 2: ANNUAL EE INVESTMENT NEEDS OVER THE 2021 – 2030 PERIOD.
SOURCE: FI-COMPASS

The study quantified energy efficiency (EE) investment needs, based on the sum reported in the **National Energy and Climate Plans (NECPs)**, at approximately **EUR 62.6 billion** for the 2021-2030. However, it's crucial to note that the **European Commission (EC)** estimates a **significantly larger investment gap** for the next decade, totalling EUR 185 billion annually, with EUR 115 billion in the residential sector and EUR 70 billion in the business sector.

The study identifies **key gaps and barriers in energy efficiency (EE) investment**. These include significant disparities between reported investment needs in National Energy and Climate Plans (NECPs) and the European Commission (EC) estimates. While promising to generate positive cash flows for investment payback, EE projects face various **barriers hindering optimal investment levels**. Numerous other obstacles exist besides well-known market failures like externalities and asymmetric information. These include **limited financial returns and long payback times**, especially for deep renovations and projects requiring non-energy-related measures. **Financial constraints** at homeowner, industry, and public sector levels and limited financial supply capacity further impede EE investments. **Grant dependency, constraints in multi-apartment building renovations, SME access to finance**, and limited public sector pipeline development capacity also pose significant challenges. Additionally, there's a **shortage of technical and contractor capacity** to execute the required scale of works, emphasising the multifaceted nature of barriers to EE investment.

The Member States analysis identified several best practices and horizontal recommendations in key areas:

- **Financial instrument/grant combination:** Encouraging the integration of financial instruments with grants to maximise funding effectiveness and reach. The proposed Common Provisions Regulation (CPR) for 2021-2027 addresses the need for a compelling combination mechanism between grants and financial instruments by allowing capital rebates alongside interest rate subsidies and technical support. Capital rebates (Lithuanian multi-apartment buildings Modernisation Programme ⁷), particularly effective in the energy efficiency (EE) sector, could be linked to achieving specific savings thresholds.
- **Technical assistance and advisory support:** Emphasizing the importance of providing **technical** and advisory support to facilitate project implementation and enhance capacity building.
- **Coordination with other supporting schemes:** Advocating for better coordination with other supporting schemes to streamline processes and optimise resources. In various Member States (MS), **multiple schemes targeting energy efficiency (EE)** exist, such as **tax rebates, grants, and financial instruments, each with different eligibility rules and constraints regarding combination**. Establishing "one-stop-shop" solutions combining supporting schemes, including advisory, technical assistance,

⁷ Data refers to: EU Energy Poverty Observatory; Jessica II Fund for Multi-apartment Building Modernisation; 2019.

grant funding, lower rates and revolving financing like the Sociétés de Tiers Financement⁸ (STF) in French regions and the Picardie Pass Renovation⁹.

- **Financial instrument size and outreach:** Ensuring that financial instruments are appropriately sized and accessible to target beneficiaries to maximise impact. In several Member States, energy efficiency (EE) financial instruments typically have a regional focus due to the regional management of the European Structural and Investment Funds (ESIF) they draw upon. However, this regional model faces important limitations:
 - Setup and management costs can significantly impact the financial instrument's effectiveness, particularly in the EE sector with many small-scale interventions.
 - The national regulatory framework for EE and supporting schemes usually differs minimally across regions.
 - Financial intermediaries prefer involvement in complex EE instruments with a substantial market size. For instance, the Private Finance for Energy Efficiency (**PF4EE**) instrument was funded by the LIFE programme and the **Spanish SME-Initiative**.
- Supporting 'alternative' financing solutions: EE investments not only offer significant environmental benefits but also have the potential to repay investments through consumption savings, leading to the development of financing solutions **like ESCO, TPF, and EPC**. These solutions reduce upfront payments for recipients, particularly beneficial for multi-apartment buildings, positively impacting public entities' balance sheets and improving the planning and monitoring of EE initiatives by emphasising energy savings to repay investments
- Sector-specific recommendations:
 - The **residential sector** faces a substantial EUR 115 billion annual energy efficiency investment gap. Effective coordination between financial instruments and supporting schemes, alongside regulatory changes to address barriers like Home-Owner-Associations financing and complex decision-making in multi-apartment buildings, is crucial for facilitating EE renovations
 - In renovating **public sector** buildings, Member States should explore EE solutions with minimal impact on debt, such as Energy Performance Contracts (EPC) and Energy Service Company (ESCO) models. Financial instruments can facilitate collaboration between public authorities, private operators (e.g., ESCOs), and financial entities to bridge funding gaps for EE renovations. Providing technical assistance and advisory support to public entities is crucial for project preparation, procedures, and monitoring systems, with early initiation and continuity being key for successful implementation. Examples such as the ELENA program demonstrate effective TA and advisory solutions for EE projects
 - The COVID-19 pandemic has severely impacted the business sector, leading to significant economic challenges across all Member States and substantial projected losses for EU enterprises, requiring robust equity injections. Despite economic downturns, investing in energy efficiency (EE) can enhance enterprises' financial performance by improving cost structures, making EE investments worthwhile. Financial instruments offering various financing options, including equity, loans, and guarantees, can support enterprises and promote adopting EE solutions like ESCO and EPC models. Given the prevalence of SMEs lacking expertise in identifying suitable EE measures, advisory and technical assistance are vital to support EE investments in the business sector.

⁸ Association SERAFIN | Services territoriaux de rénovation : accompagnement et financement (serafin-renov.fr)

⁹ A European project (hautsdefrance.fr)

2. MARKET CONTEXT/OVERVIEW

EEFIG SR15 Working Group on “Collecting and monitoring data on energy efficiency investments and financing across EU Member States and targeted economic sectors” presented¹⁰ in February 2023, the EU is facing 2 **main challenges: data collection and harmonised methodology** related to monitoring and evaluating energy efficiency in targeted economic sectors (residential buildings, SMEs, and industry). SR15 group estimated the European Investment Bank Investment Survey (EIBIS) as “a powerful and established tool” for short-term analysis. Still, it concluded that further effort should be made to collect data, preferably in the development of AI tools, to collect and analyse results on energy efficiency in buildings by each member state. Another EEFIG SR7 Working Group presented in November 2021 research on “The Evolution of Financing Practices for EE in Buildings, SMEs and Industry.”¹¹.

SR7 Working Group provided information on policies and financing models supporting energy efficiency investments among member states. SR7 Working Group tackled the effectiveness of national policies and EE programmes to facilitate the growth of energy performance contracting and ESCOs, notably for public and commercial buildings, energy-intensive SMEs and existing EU funds and financial instruments. SR7 Working Group diagnosed the main barriers to public, residential and commercial investments in buildings' energy efficiency and provided reforms needed in the building market. **The common recommendations of both groups could be reduced to a couple of main points:** the need for a joint database: building stock, finished projects and results

- AI tools: engagement of innovative start-ups to develop AI tools for searching and evaluating Member States databases.
- Large programmes aiming at improving the EE in public buildings have been announced, yet only an insufficient number have been renovated.
- developing the ESCO market can also play a significant role in commercial buildings.
- Public technical assistance and project development assistance is critical.
- Public grants, green mortgages, tailored renovation loans and new blended finance facilities combined with technical assistance.
- One-stop shops and other retail-facing platforms and organisations to support building owners and local authorities.

SR7 Working Group findings showed the financial gap in the industry and SME's corporate investments. They highlighted the **key drivers** and recommendations that could drive rapid progress:

- Financing of ESCOs and EE special purpose vehicles to support high-investment and transition costs
- Accounting treatment of EnPC for the private sector in line with Eurostat guidance note of September 2017
- Integration of ESG criteria plan to reduce GHG emissions and extended non-financial corporate sustainability reporting
- Develop de-risking tools such as guarantees from Governments, and scalable innovative financial instruments to finance EE investments (on-bill repayments, on-tax financing, green mortgages and renovation loans)

¹⁰ [SR15 WG on Data Final Report - PPT of main results conclusions and recommendations.pdf \(archive-it.org\)](#)

¹¹ [SR7 Financial instruments Final Report Appendix A - PPT of main results conclusions and recommendations 16 11 21.pdf \(archive-it.org\)](#)

2.1. BULGARIA UPDATE

2.1.1. GENERAL CONSIDERATIONS

In mid-2022, Bulgaria's population was around 6.5 million, and the continuing trend of steady population decline in recent years persists. On the other hand, in 2023 the GDP reached approximately EUR 14,595 per capita, which is a significant increase compared to EUR 5,803 a decade earlier. However, it is important to note that according to the 2023 Country Report¹², Bulgaria still has the most carbon-intensive economy in the EU with greenhouse gas levels four times higher than the EU average. The same report highlights that while Bulgaria stands to gain from a significant boost in investments supporting the green transition of its economy, the decarbonization of the energy sector remains a critical challenge. Despite alignment with the European Green Deal and REPowerEU initiatives, substantial progress has yet to be achieved.

This is precisely where the National Energy and Climate Plan (NECP) should intervene, outlining the so needed reforms for mobilization of private investments for energy and climate targets, based on investment needs analysis, and comprehensive overview of public and private investment needs.

The main objectives of draft updated [Integrated National Energy and Climate Plan](#), submitted by Bulgaria with a delay on 20 February 2024, are as follows:

- Stimulating low-carbon development of the economy;
- Development of a competitive and secure energy sector;
- Increasing energy efficiency and reducing carbon emissions, including by exploiting the full potential of natural gas as an energy source and transitional fuel;
- Reducing dependence on fuel and energy imports;
- Ensuring energy is affordable for all consumers.

In terms of energy efficiency, the NECP sets out ambitious targets, but taking a closer look at the European Commission's [response](#) from 26 April 2024, *“this is not reflected in the planned measures needed to achieve them”*. Furthermore, although the funding sources are outlined as follows:

1. Structural Funds 2021-2027
2. The Invest EU programme;
3. The Modernisation Fund;
4. The Energy Efficiency and Renewable Sources Fund;
5. National programme for energy efficiency in multi-apartment buildings;
6. National Trust EcoFund – Climate Investment Programme;
7. Renewable Energy, Energy Efficiency, Energy Security Programme, financed by the Financial Mechanism of the European Economic Area 2014-2021;
8. National Recovery and Resilience Plan of the Republic of Bulgaria;

the lack of quantification of the needed investments makes it impossible to identify the funding gaps and distinguish between public and private funding.

As far as the banking sector is concerned, products specifically targeting energy efficiency investments have not yet been observed.

2.1.2. FINANCING ENERGY EFFICIENCY IN BUILDINGS (PUBLIC AND PRIVATE), SMEs, BUILDINGS OF THE TERTIARY SECTOR

¹² https://economy-finance.ec.europa.eu/system/files/2023_05/BG_SWD_2023_602_en.pdf

RESIDENTIAL BUILDINGS RENOVATION

One of the main challenges for sustainable renovation of residential buildings is the long-standing provision of 100% grants, which has created misconceptions in households that it is not their responsibility and that their buildings will be renovated for free. The situation is compounded by the fact that the main percentage of multi-family residential buildings, dating back to the communist era, is in deplorable condition, exceeding two to three times the consumption of buildings built to current standards. Another major factor specific to Bulgaria is that the residents of multi-family residential buildings are also the owners of the apartments, and only their understanding and synchrony can organise the renovation of the entire building. This was obvious during the implementation of the first large-scale renovation programme for multi-family buildings in 2016 when local authorities faced extreme difficulties convincing condominium representatives to come together and participate in the initiative.

Statistics show that since the launch of the renovation programs in 2005, more than EUR 2bn will be spent by 2026, which will renovate about 5% of all buildings. Funds for their continuation are not yet available.

As far as single-family residential buildings are concerned, there has been no successful initiative/mechanism for their major renovation in Bulgaria. The REECL facility developed by the European Commission, EBRD, and the Bulgarian Ministry of Energy, for example, financed only single measures. On the other hand, the product developed by Sustainable Cities Fund and United Bulgarian Bank for the renovation of single-family buildings has never taken off on the market, first due to the lack of grant financing and second, due to the requirement for the owner to pay for an energy audit, which invalidates the preferential interest rate conditions.

In summary, despite the ambitious Long-Term Renovation Strategy (LTRS) introduced in 2021, the required policy reforms have yet to be enacted, and the necessary financial instruments and other prerequisites for its execution are still lacking. This is especially noteworthy considering that, out of the targeted 19 million square meters of the renovated area until 2030, current estimates suggest that achieving 5 million square meters is unlikely. The investment gap, according to different sources (EIB and WB presentations and discussions with banks' experts, some during the SMAFIN and BeSMART projects), is between EUR 1.65 bn and EUR 2.43 bn.

PUBLIC BUILDINGS RENOVATION

For many years, the public building stock has received significant funding from EU Structural and Investment Funds and other sources, such as the European Economic Area Financial Mechanism. This has led to the renovation of many public buildings, mainly with grant funding. The main problem with these buildings is that almost all programmes set compromise criteria for renovation levels, and many buildings renovated before 2015 have relatively low energy performance.

In addition, although alternative mechanisms such as ESCO contracts and the Energy Efficiency and Renewable Sources Fund existed in the market, they struggled to compete with the high grant intensity (typically 100%) of the programmes, making them secondary-market players.

Last but not least, the lack of qualified staff in all parts of the chain - from the energy consultants, designers and construction workers to the municipal experts who award the contracts and supervise the implementation - leads to lower quality of the projects and a failure to achieve the pre-set indicators.

Given the large percentage of renovated buildings and the diverse funding sources mentioned above, there is no investment gap for renovating public buildings and reaching the targets of LTRS for 2030. However, the problem of the low quality of already renovated buildings remains. There is a lack of analysis of the additional investment needed to improve the performance of these "renovated" buildings, where the so-called "lock-in" effect has occurred and achieving better performance involves significant and less economically justified investment.

SMEs AND BUILDINGS OF THE TERTIARY SECTOR

Unfortunately, the findings during the SMAFIN project (According to an in-depth analysis by EIB from May 2020¹³, “energy efficiency in industry and specifically SMEs has been promoted by grant schemes and financial instruments financed by European Structural and Investment Funds and institutions such as European Bank for Reconstruction and Development. This, however, initiated a market based on grant financing, where the most economically feasible projects are supported with funding. In most cases, energy efficiency benefits are a small portion of the expected total project benefits, mainly from reduced Operational & Maintenance costs and a significant increase in manufacturing capacity) which are still relevant. The recent NECP draft does not indicate that significant changes in the status quo can be expected.

FINANCIAL SECTOR PERSPECTIVE (PRELIMINARY)

Based on discussions and meetings with representatives from the financial sector (during the activities of SMAFIN and BeSMART projects), the following takeaways can be drawn:

- Regulatory obstacles hinder progress, such as restrictions on taking debt for regional and local authorities. For example, in the case of the Energy Efficiency and Renewable Sources Fund, municipal obligations are not included in their debt.
- Inconsistencies in policies and poor planning of government financial programs confuse market participants. Better communication between the state and the private sector is necessary, along with a coherent approach to transitioning to lower-intensity grant schemes and more financial instruments to meet the needs of all client types, complemented by technical assistance.
- Lending to condominiums is complicated due to a lack of collateral, but government-backed risk-sharing schemes would help banks tap into the significant lending potential for EE renovations.
- Small project sizes result in high project development and transaction costs. Aggregation of projects by one investor is uncommon and not widely recognised by operational program management authorities.
- There is insufficient data and monitoring of implemented EE measures and no established practice for verifying the results of EE projects.
- Environmental, social, and governance (ESG) factors are insufficiently priced, understood, and analysed in financial analyses by private financial institutions. Investors are not incorporating ESG data into their investment processes.
- A significant risk is the lengthy project assessment process, which can take more than 1-2 years. This could potentially render energy audits and technical designs obsolete.
- Establishing a public guarantee fund could cover various risks, including technological, implementation, ROI assessment, credit, business risks, and insurance.

Concerning the establishment of the National Decarbonisation Fund (NDF), Fis have made the following conclusions:

- Bulgarian financial institutions, mainly banks, could be good partners for the NDF. They understand the investment cycle but need quick, flexible funding to maintain capital flow. Banks will require technical assistance to ensure quality control of funded projects. A national database with information about high-rated ESCOs and a benchmark database of completed EE projects would be handy.

¹³ FI-Compass, The potential for investment in energy efficiency through financial instruments in the European Union, Bulgaria in-depth analysis, May 2020. Available at: https://www.fi-compass.eu/sites/default/files/publications/The%20potential%20for%20investment%20in%20energy%20efficiency%20through%20financial%20instruments%20in%20the%20European%20Union%20-%20Bulgaria%20in-depth%20analysis_0.pdf

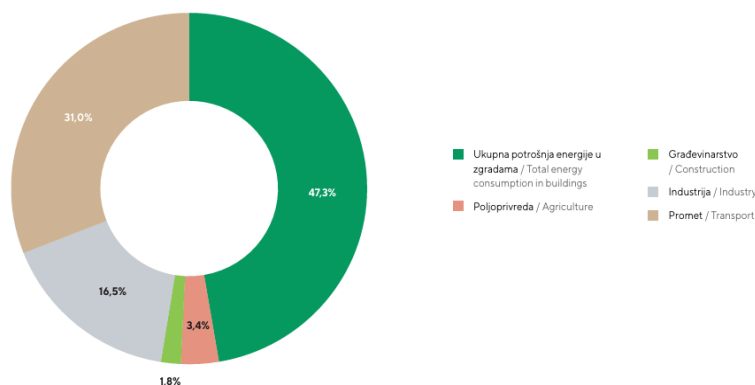
Banking institutions lack experience with condominium financing. The NDF and other financial institutions must create sufficient instruments combining risk-sharing and technical assistance to enter this market. Changes in the legal and regulatory framework for condominium management are also needed to allow banks to lend more confidently to condominium owners' associations

2.2. CROATIA UPDATE

2.2.1. GENERAL CONSIDERATIONS

Croatia, located in southeastern Europe, had an estimated population of 3.8 million in mid-2022. With an average density of 68.1 inhabitants per km², its GDP reached 14.660 EUR¹⁴ (50,64% EU27), indicating significant growth over the past three years. In the latest Annual Energy Report for 2022¹⁵ Final energy consumption in 2022 amounted to 281,1 PJ (equivalent to 6,714 Mtoe) and decreased by 2,4 per cent compared to the previous year (288,0 PJ, equivalent to 6,9 Mtoe).

In the final energy consumption in 2022, structure share of total national buildings stock participated with



Slika 9.2.1. Udio ukupne potrošnje u zgradarstvu u 2022. godini u ukupnoj potrošnji finalne energije / Figure 9.2.1. Share of total consumption in buildings in 2022 in final energy consumption
Izvor: EIHP / Source: EIHP

FIGURE 3: SHARE OF TOTAL CONSUMPTION IN BUILDINGS IN 2022 IN FINAL ENERGY CONSUMPTION, EIHP, CROATIA

home to 767,445 residents, comprising one-fifth of Croatia's total population. However, in 2020, Croatia faced two devastating earthquakes: one in Zagreb during the COVID-19 pandemic in March and another, registering 6.2 on the Richter scale, striking the Sisak-Moslavina, Karlovac, and Zagreb counties in December, causing additional damage to buildings in Zagreb. The estimated damage in Zagreb and surrounding areas, including Banovina, totals around EUR 17 billion or HRK 129 billion, necessitating not only the implementation of existing non-regulatory energy efficiency measures proposed in the National Energy and Climate Plan for 2021-2030 but also the acquisition of new funding.

The [National Energy and Climate Plan \(NECP\)](#) 2021-2030 is under the responsibility of the Ministry of Economy and Sustainable Development, builds on existing national strategies and plans and outlines how the Croatia intend to address:

- energy efficiency; renewables; greenhouse gas emissions reductions; interconnections; research and innovation

With the preparation of the NECP, Member States are required to produce a Progress Report every two years, aligning with the European Green Deal and legislative frameworks like the 'Fit for 55' package and the REPowerEU Plan. In Croatia's first Progress Report on the NECP submitted in the first half of 2023, Commission reviews indicate that while energy efficiency policies are well-described, there's partial

¹⁴ Eurostat: Real GDP per capita_sdg_08_10. Available at: [Statistics | Eurostat \(europa.eu\)](https://statistics.eurostat.eu)

¹⁵ Ministry of the Economy and Sustainable Development, publication "Energy in Croatia 2022", 2024 page 10: [Energija-u-HR-22_WEB-novo.pdf \(eihp.hr\)](#)

estimation of energy savings, particularly in buildings. Croatia's NECP goals aim to increase final energy consumption to 274.20 PJ equivalent to 6.55 Mtoe by 2030, with a significant rise in renovation rates from 0.7% to 3% by 2030. Croatia's **Long-Term Renovation Strategy** estimates a total investment of €32.3 billion by 2050, focusing on energy and comprehensive renewal of its building stock, with substantial allocations for energy-efficient buildings and renewable electricity generation.

FINANCING ENERGY EFFICIENCY IN BUILDINGS (PUBLIC AND PRIVATE), SMEs, BUILDINGS OF THE TERTIARY SECTOR

In Croatia, advancing energy efficiency financing aligns with ambitious targets outlined in the National Energy and Climate Plan (NECP). With a focus on reducing emissions and increasing building renovation rates, the NECP emphasizes holistic renovations for multi-family, public, and heritage buildings. Projects funded under the plan are expected to achieve substantial reductions in heat demand and energy consumption. However, challenges such as **rising construction costs** and complex **seismic renovations** have amplified financing needs, which far exceed current available funds allocated in National plan for National Recovery and Resilience Plan 2021-2026 (NPOO), and European funding opportunities for period 2014-2020. To bridge financial gap and speed up the renovation of earthquake damaged and un-damaged buildings, initial budget was supplemented with additional funds. **The National plan for Recovery and Resilience 2021-2026 (NPOO)** was published in 2021, with the Appendix to **National plan for Recovery and Resilience 2021-2026 (NPOO)** published in 2023.

TABLE 1: DATA FROM NATIONAL ENERGY AND CLIMATE PLAN (NECP) AND NATIONAL ACTION EE PLAN 2022-2024 (NAPENU), CROATIA, AUGUST 2022

NECP ID Policy or Measure Name	Main Objective	Monitoring and Executing Body	Financing plan 2021- 2030
ENU-2 ALL buildings NZEB standard	Investors and construction sector for multi-apartment, public, cultural-heritage buildings, promotion of nZEB renovation	MPGI	MPGI Budget
ENU-3 Multi-Apartment Building Energy Renovation Program	Reducing thermal energy and energy consumption;	MPGI, FZOEU, MRRFEU, HBOR	NPOO-Grants OPKK-Financial instrument Commercial banks- Loans
ENU-4 Single-family houses Energy Renovation Program	Reducing demand for thermal energy and energy consumption;	MPGI, FZOEU, MRMSOSP	Financial - Grants
ENU-5 Public Sector Buildings Energy Renovation Program	Reducing demand for thermal energy and energy consumption; development of ESCO market	MPGI FZOEU APN	Financial - ESCO model and grants 2014-2015 Financial - Grants Affordable loans Energy service 2016- 2020
ENU-6 Energy Renovation Program for Buildings with Cultural Heritage Status	Reducing demand for thermal energy and energy consumption; development of ESCO market	MKM, MPGI, MRRFEU, FZOEU	Financial - Grants

NECP ID Policy or Measure Name	Main Objective	Monitoring and Executing Body	Financing plan 2021- 2030
ENU-2 ALL buildings NZEB standard	Investors and construction sector for multi-apartment, public, cultural-heritage buildings, promotion of nZEB renovation	MPGI	MPGI Budget
ENU-3 Multi-Apartment Building Energy Renovation Program	Reducing thermal energy and energy consumption;	MPGI, FZOEU, MRRFEU, HBOR	NPOO-Grants OPKK-Financial instrument Commercial banks- Loans
ENU-4 Single Family Houses Energy Renovation Program	Reducing demand for thermal energy and energy consumption;	MPGI, FZOEU, MRMSOSP	Financial - Grants
ENU-5 Public Sector Buildings Energy Renovation Program	Reducing demand for thermal energy and energy consumption; development of ESCO market	MPGI FZOEU APN	Financial - ESCO model and grants 2014-2015 Financial - Grants Affordable loans Energy service 2016- 2020
ENU-6 Energy Renovation Program for Buildings with Cultural Heritage Status	Reducing demand for thermal energy and energy consumption; development of ESCO market	MKM, MPGI, MRRFEU, FZOEU	Financial - Grants

2.2.1.1. NATIONAL PLAN FOR RECOVERY AND RESILIENCE (NPOO) 2021-2026¹⁶

The **National Plan for Recovery and Resilience 2021-2026 (NPOO)** budget is based on each Member State's national plan. It is financed from funds provided by the Mechanism for Recovery and Resilience (MRR) within the instrument EU NextGeneration. Croatia NPOO secured financial resources in the amount of almost EUR 9.9 billion, of which **EUR 5.79 billion are grants** and about **EUR 4.25 billion of favourable loans**¹⁷, dedicating **39,02%**¹⁸ of expenses for climate investments and reforms.

The NPOO plan is structured to include five (5) components and one (1) initiative:

- Components: Economy, Public administration, judiciary and state property, Education, science and research, Labor market and social protection, Health care
- Initiative C6: Building reconstruction

The **NPOO** includes measures to promote access to "green" financial instruments, including loans and guarantees from European funds. All available public finance sources, including the RRF, ERDF, EU Solidarity Fund, World Bank Loan, and MFF, are considered, with efforts to coordinate funding to prevent duplication. The plan also aims to develop the ESCO market further.

¹⁶ [Vlada Republike Hrvatske | Nacionalni plan oporavka i otpornosti 2021.-2026. - Dokumenti \(gov.hr\)](#) and [NAPeN 2022.-2024..pdf \(gov.hr\)](#)

¹⁷ Online database for EU funding, Croatia. Available at: [EU fondovi - NPOO \(Nacionalni plan oporavka i otpornosti\) - fondovieu.gov.hr](#)

¹⁸ European Commission, Recovery and Resilience Scoreboard. Available at: [Recovery and Resilience Scoreboard \(europa.eu\)](#)

NPOO: PUBLIC AND PRIVATE BUILDINGS

Based on the Ministry of Physical Planning, Construction and State Assets (MPGI) information¹⁹ and Ministry of Economy and Sustainable Development (MINGOR)²⁰ of the Republic of Croatia, investment needs for building renovations and financial measures are:

Multi-Apartment Building Energy Renovation Program:

The estimated investment cost in 2021-2030 is 3.81 billion EUR. The financial measure is an extension of 2 (two) NPOO components: measure C6.1 initially allocated 65,58 mil EUR, and the NPO Appendix included an extended measure C7.2. and allocated an additional 94,23 mil EUR. Open-call was published on the digital platform <https://fondovieu.gov.hr/>, led by the Ministry of Physical Planning, Construction and State Assets, and supported by the Environmental Protection and Energy Efficiency Fund. Expected savings and impact evaluation are linked to the promotion of nearly Zero Energy Building, savings in energy consumption and CO2 reductions.

Beneficiaries are micro, small, medium and large enterprises and citizens.

Until 2023, 235 projects applied for financing with estimated costs of 79,55 mil EUR. 103 projects signed contracts with an approved budget of 43,21 mil EUR (grants).

SINGLE FAMILY HOUSES ENERGY RENOVATION PROGRAM:

Estimated investment cost in the period 2021-2030. is 3.44 billion EUR. The financial measure is financed from the Environmental Protection and Energy Efficiency Fund budget divided into two target groups:

- Single family houses-homeowners
- Energy Poverty Reduction Program

The Environmental Protection and Energy Efficiency Fund (FZOEU) published and supported open-call for single-family houses. In 2023, the EPEEF budget 2024 allocated 120 million EUR for the Single Family Houses Energy Renovation Program. Expected savings and impact evaluation are linked to the promotion of nearly Zero Energy Building, savings in energy consumption and CO2 reductions

Energy Poverty Reduction Program:

For implementing the Energy Poverty Reduction Program, NPOO allocated 35,84 for both Information & Financial Measures.

Main objective is alleviation of energy poverty and vulnerability in buildings managed by the Ministry of Physical Planning, Construction and State Assets, where residents cannot participate in financing necessary repairs.

Public Building Energy Renovation and ESCO Program:

Estimated investment cost in the period 2021-2030. is 1.2 billion EUR divided in two target groups:

- Public Building Energy Renovation Program.
- ESCO financing model for public buildings.

Open-call was published on the digital platform <https://fondovieu.gov.hr/> with the allocation of 99,99 mil EUR. Expected savings and impact evaluation until 2030 for thermal energy, energy consumption, promoting nearly Zero Energy Building (nZEB), and reducing CO2 emissions are final energy consumption savings 1

¹⁹ Ministry of Physical Planning, Construction and State Assets, MPGI, Croatia. Presentation buildings renovation 2023, available at: [2023_12_12_IKS_NPOO_Inicijativa_C6.pdf \(gov.hr\)](#)

²⁰ Ministry of Economy and Sustainable Development, MINGOR, Croatia. Database live table, available at: [03_Policies and Measures - Croatia_10_10_2023.xlsx \(live.com\)](#)

Until 2023, 386 projects applied for financing with estimated costs of 307,35 mil EUR. Until 2023, 32 projects signed contracts with an approved budget of 38,52 million EUR (grants).

Energy Renovation Program for Buildings with Cultural Heritage Status

Estimated investment cost in the period 2021-2030. is 2,49 billion EUR divided into two target groups:

- Building Energy Renovation Program
- ESCO financing model for buildings

The open call was published on the digital platform <https://fondovieu.gov.hr/pozivi/65>, which cost 39,82 mil EUR and was supported by the Environmental Protection and Energy Efficiency Fund. Expected savings and impact evaluation until 2030 are based on thermal and energy cumulative savings, nearly Zero-Energy Building (nZEB) renovation, increasing the use of renewable energy sources (RES), and reducing CO2 emissions.

Until 2023²¹ 23 projects signed contracts with the Ministry of Culture and Media (MKM).

Reconstruction of buildings damaged during the earthquake in Croatia

The damages caused by the earthquakes in 2020 were enormous: 11,41 billion EUR for Zagreb and its surrounding area and 5,52 billion EUR for the Banovina region, which totals about **16,90-17 billion EUR**²²**Special attention and funding were given to rehabilitating buildings damaged by the earthquake. Private homeowners could apply for 2 schemes: organised reconstruction or self-reconstruction. A total of 40 mil EUR was allocated for rehabilitating multi-apartment buildings.**

NPOO: ONE-STOP-SHOP

Reform C6.1. R3 and NPOO Appendix extended measure C7.2.R1 is centred on enhancing services essential for expediting procedural steps to ensure higher quality and more efficient earthquake reconstruction. The reform prioritises establishing "**one-stop-shop**" services, consolidating all required information and services in one location. This consolidation aims to enhance the effectiveness of measures related to energy efficiency and accelerate the green transition process.

NPOO Appendix estimated investment costs for 2021-2030 to be up to 4,33 million EUR, including REPowerEU, with the "one-stop-shop" concept extending to private and public buildings.

Beneficiaries are local and regional authorities, citizens, and NGO's.

NPOO: SME AND ENERGY EFFICIENCY²³

Energy efficiency investments are vital for SMEs and large corporations in Croatia due to the impact of rising energy costs on profits. The EIB Investment Survey 2022 revealed that nearly 60% of Croatian firms experience climate-related events. Interestingly, many view stricter climate standards as a risk rather than an opportunity, with only 39% setting targets for emissions. Despite this, 85% are actively reducing greenhouse gas emissions. A third of Croatian firms have invested in addressing weather event impacts and carbon emissions, with over half planning similar investments in the next three years.

²¹ Registar ugovora - NPOO.C6.1.R1-I3.01 all for grants "Energy renovation of buildings with the status of cultural property. Available at: [Detalji poziva "Energetska obnova zgrada sa statusom kulturnog dobra" - oznaka "NPOO.C6.1.R1-I3.01" - NPOO \(Nacionalni plan oporavka i otpornosti\) - fondovieu.gov.hr](https://fondovieu.gov.hr/pozivi/65)

²² Ministry of Physical Planning, Construction and State Assets ,MPGI, Croatia..Available at : [Ministry of Physical Planning, Construction and State Assets - Financial resources for reconstruction \(gov.hr\)](https://mptg.gov.hr/)

²³ National plan for Recovery and Resilience 2021-2026 (NPOO), Croatia, Subcomponent C1.1.1 "Strengthening competitiveness and green transition of the economy „[NPOO - Gospodarstvo - prezentacija.pdf \(gov.hr\)](https://npo.gov.hr/)

Therefore, **National Plan for Recovery and Resilience 2021-2026 (NPOO)** Subcomponent C1.1.1 “Strengthening competitiveness and green transition of the economy” prioritises energy efficiency improvements in terms of SME and Large caps energy savings through increasing the renewable energy sources (RES) in manufacturing industries and reducing the share of conventional (fossil) fuels in total energy consumption by introducing a system for the use of renewable energy sources (RES).

The estimated investment cost for the period 2021-2030 has not been analysed yet, but it will align with Croatian companies' investment needs.

Open-call was published on the digital platform <https://fondovieu.gov.hr/pozivi/108> with the allocation of 252,17 mil EUR (1,9 billion HRK).

Beneficiaries are SMEs and Large Caps.

Expected savings and impact evaluation, based on eligible costs and objectives, include introducing new technologies, reducing energy consumption, implementing CO2 emission reduction measures, and integrating digital systems for energy and water consumption. These efforts are expected to lead to at least a 20% reduction in harmful emissions compared to investments not focused on energy efficiency, along with a target of using renewable energy sources and recycled materials in production, comprising a minimum of 20% of the total material volume.

NPOO: TERTIARY SECTOR COMPANIES AND ENERGY EFFICIENCY

The tertiary sector, spanning commerce to tourism, dominates Croatia's high-income economy, comprising 70% of GDP. Tourism, contributing nearly 20% of GDP, is vital, with 11.2 million tourists in 2021. The NPOO's Subcomponent C1.6.R1 aims to enhance tourism sustainability through green projects like energy efficiency, renewables, circular economy practices, and digital tech integration, fostering a sustainable tourism transition.

The open call was published on the digital platform <https://fondovieu.gov.hr/pozivi/37>. The Ministry of Tourism and Sport (MINT) supported the allocation of 61,71 mil EUR.

Expected savings and impact evaluation are based on the reconstruction and improvement of public infrastructure. Wellness and health industries prioritise energy efficiency and renewable resources, aiming for at least 30% energy and greenhouse gas savings. Additionally, new public tourist constructions will meet the standard for nearly zero-energy buildings (nZEB). These efforts anticipate substantial energy usage and emissions cuts, bolstering environmental sustainability and tourism sector resilience.

Beneficiaries are public-owned companies, local and regional authorities, health and wellness institutions

The Croatian Government has increased²⁴ grants of EUR 60 million for the "Regional diversification and specialisation of Croatian tourism through investments in high-value tourism products" under Group 3, which focuses on health and wellness tourism infrastructure. This brings the total funds for Group 3 to EUR 121.7 million. The successful implementation of these projects is crucial for addressing seasonality, boosting added value, and promoting continental tourism. Encouraging health tourism development is a priority in the Government's 2021-2024 Program and the Sustainable Tourism Development Strategy until 2030.

²⁴ MINT, Croatia: [Ministarstvo turizma i sporta Republike Hrvatske - „Regionalna diversifikacija i specijalizacija hrvatskog turizma kroz ulaganja u razvoj turističkih proizvoda visoke dodane vrijednosti“ \(gov.hr\)](https://www.mint.hr/hrvatski/ministarstvo-turizma-i-sporta-republike-hrvatske-razvoj-turistickih-proizvoda-visoke-dodane-vrijednosti)

2.2.1.2. EU FUNDING SCHEMES

OPERATIONAL PROGRAMME COMPETITIVENESS AND COHESION 2021-2027 (OPKK)^{25 26}

During its session on November 5, 2020, The Republic of Croatia adopted the Decision on Operational Programmes related to Cohesion Policy for the EU's 2021-2027 financial period, earmarking substantial funds:

- European Fund for Regional Development (ERDF) foreseen amount: 5.36 billion EUR
- Cohesion Fund (CF) foreseen amount: 1.546 billion EUR
- European Social Fund Plus (ESF+) foreseen amount: 1.982 billion EUR
- Just Transition Fund (JTF) foreseen amount: 179 million EUR

Croatia will receive €9 billion from the Cohesion Policy from 2021 to 2027 and dedicate nearly 31% of [European Regional and Development Fund](#) (ERDF) and 39% of [Cohesion Fund](#) resources to climate objectives.²⁷ Notably, €2.87 billion will enhance energy efficiency, increase renewable energy share to 60% of electricity by 2030, promote a circular economy, and support climate resilience and biodiversity. **ERDF Fund interventions:**

- Implementation of the energy and comprehensive renovation program in public sector buildings and multi-apartment buildings (NEKP and LTRS MEN-2/ENU3, MEN-4/ENU-5).
- Implementing the Energy Renovation Program for cultural-heritage buildings (NEKP MEN-5/ENU-6) promotes three renovation models: individual energy measures, integral renovation, and comprehensive renovation.
- Implementing the Circular Management of Space and Buildings Program (NEKP MS-9/MCC-9) involves reusing abandoned or neglected spaces to prolong the durability of existing buildings.
- Support for sustainable, energy-efficient and comprehensive reconstruction of buildings damaged **during the earthquake in Croatia** by the "Build Back Better" (BBB) principle.
- Adoption and implementation of the Energy Poverty Reduction Program (NEKP).
- Increasing investment of the company's energy efficiency, decarbonisation and reduced emissions of greenhouse gases and pollutants (industry, service activities, tourism, commercial sector and others)
- Establishment of a Financial institution for co-financing the renovation of multi-apartment buildings and energy efficiency in industry and service. The new financial instrument will finance the total value of the project (100%), with the possibility of writing off part of the principal if the project's goals are achieved.

Goals entail decarbonising buildings and the economy, enhancing capacity for improved energy efficiency, implementing comprehensive and circular renovations, utilising renewable energy sources, and adhering to the "Build Back Better" principle, with a minimum reduction target of 50% in projected heating energy consumption (QHnd) and 30% in overall energy consumption (Eprim) compared to pre-renovation levels.

From 2024-2029, the following progress should be visible: grants and financial instruments for 95% SMEs and Large caps in less developed regions, 2.600 apartments with increased EE, 281.000 m2 public houses m2 with increased EE²⁸.

Expected outcomes entail:

- Private investments matching public support, escalating from zero in 2021 to €279,630,000 in 2027 for less developed regions. Energy savings targets include:

²⁵ Open Data Portal for the European Structural Investment Funds - European Commission | Data | European Structural and Investment Funds (europa.eu)

²⁶ [PKK-2021-2027.pdf \(strukturnifondovi.hr\)](#)

²⁷ Open Data Portal for the European Structural Investment Funds - European Commission | Data | European Structural and Investment Funds (europa.eu)

²⁸ OPKK 2021-2027 2.1.1.1.2. Pokazateljji: [PKK-2021-2027.pdf \(strukturnifondovi.hr\)](#)

- Annual primary energy consumption (encompassing residential facilities, public buildings, companies, etc.) diminishing from 821,150.00 MWh/Y in 2021 to 680,150.00 MWh/Y in 2027.
- Estimated greenhouse gas emissions decreased from 193,109.00 in 2021 to 164,202.00 in 2027 for less developed regions.
- Investment Progress: Financing schemes and grant have not been published yet.

EU SINGLE MARKET & ENTERPRISE EUROPE NETWORK (EEN)

The [EENergy](#) project provides 9 million euros to promote innovation and sustainability among SMEs in Europe, emphasising energy efficiency and environmental protection. The project aims to support SMEs in developing and implementing energy efficiency action plans, with guidance from sustainability advisors. Eligible costs include investments in facilities and equipment, advisory services, and employee skills development, contingent upon achieving at least 5% energy savings within one year.

Open-call was published on [HAMAG-Bicro web page](#), Entrepreneurs can apply for up to 10,000 euros in grants, with a minimum of 900 grants available.

MODERNISATION FUND – CROATIA 2022

Croatia's Modernisation Fund, supported by EU Emissions Trading System (EU ETS) revenues, provides a significant avenue for advancing energy efficiency. With a 3.14% share, Croatia aims to invest substantially in projects governed by Commission Implementing Regulation EU 2020/1001, in collaboration with the European Commission and the European Investment Bank. Revenues from auctioning 2% of total allowances for 2021-2030 under the EU ETS contribute to the fund's financing, empowering Croatia to drive impactful energy efficiency initiatives. By strategically allocating funds to energy efficiency projects, Croatia aims to maximise the impact of EU ETS revenues, driving tangible progress towards a more sustainable and resilient future.

Financially, Croatia earmarks €40 million from the Modernisation Fund for the "Scheme to support investments in energy efficiency improvement" in 2022, representing a 50:50 financing ratio toward the total investment costs of €80 million.

Payments for confirmed investments from the Modernisation Fund are managed by Croatia's Environmental Protection and Energy Efficiency Fund (FZOEU), overseen by the Ministry of Economy and Sustainable Development (MINGOR) under the Act on Climate Change and Ozone Protection. MINGOR submits investment proposals to the European Investment Bank (EIB) for fund allocation.

In 2022, Croatia allocated €40 million from the Modernisation Fund to support energy efficiency improvements, facilitating investments in €80 million total. These investments are crucial for enhancing energy efficiency across sectors, contributing to broader sustainability goals and climate mitigation efforts.

BANKS AND CAPITAL MARKETS FOR ENERGY EFFICIENCY

Croatian banking sector is actively [advancing green financing initiatives](#) to support the transition to a sustainable economy. Banks are increasingly offering financial products aimed at promoting energy efficiency, renewable energy projects, and environmental sustainability. This shift aligns with national and EU goals for reducing carbon emissions and fostering green growth. The sector is also encouraging investments in technologies and practices that contribute to long-term environmental benefits, demonstrating a commitment to integrating sustainability into financial strategies. However, capital markets in Croatia remain a weak spot that should be further encouraged and incentivized to support these green financing initiatives.

Financing building renovation, energy efficiency, and decarbonization is challenging due to the need for an optimal financial model. Although grants are a key funding source, they typically do not cover the entire investment cost. Therefore, recipients must usually contribute 30-60% of their own funds.

ESIF AND BANKS FOR PUBLIC BUILDINGS²⁹

The financial instrument "ESIF Loans for Energy Efficiency in Public Sector Buildings" in Croatia was part of the Operational Programme "Competitiveness and Cohesion 2014-2020" (OPCC), with an initial allocation of 25,21 milion EUR (190 million HRK) from the European Structural and Investment Funds (ESIF), later increased to 53,46 milion EUR (402.8 million HRK). Croatian Bank for Reconstruction and Development (HBOR) implemented the program, in cooperation with the Environmental Protection and Energy Efficiency Fund and the Ministry of Construction and Physical Planning.

Grant implementation:

- HBOR directly implements the program, in cooperation with the Environmental Protection and Energy Efficiency Fund and the Ministry of Construction and Physical Planning
- Grants are supporting 35%-60 % investments costs
- Commercial bank loans are supporting co-financing

Compared to grants, ESIF financial instruments provide:

- Simplified access with lower administrative requirements
- Full amount disbursement rather than partial refunds
- Eligibility of VAT as a cost

Eligible beneficiaries and borrowers:

- public sector entities that have received a grant decision under the "Energy Efficiency and Use of Renewable Energy Resources in Public Sector Buildings" tender by the Ministry of Construction and Physical Planning.
- Local or regional government, Public and social institutions
- Religious communities engaged in social activities
- Investments that lead to a reduction in energy consumption by at least 50% annually

Technical assistance and interest rates:

- interest rates of 0.1%, 0.25%, or 0.5% per annum, depending on the development level of the project area;
- free from banking fees:
- ELENA grants for project documentation preparation

Compared to grants, ESIF financial instruments provide:

- Simplified access with lower administrative requirements
- Full amount disbursement rather than partial refunds
- Eligibility of VAT as a cost
- No public procurement and auditing requirements, expediting asset acquisition

ESIF financing for period 2014-2020 has ended and new calls will be financed from EFRD - Operational Program Competitiveness and Cohesion 2021-2027

HBOR URBAN DEVELOPMENT FUND

The HBOR Urban Development Fund aims to finance long-term public sector infrastructure projects and capital investments (investments in fixed assets—tangible and intangible assets) of public entities in mixed commercial/public infrastructure, i.e. investments that, in addition to the public element, also have a certain commercial content that implies the generation of revenues from the collection of service fees.

Fund implementation:

- HBOR Urban Development Fund, commissioned by the Croatian Ministry of Regional Development and EU Funds.

²⁹ Ministry of Physical Planning, Construction and State Assets, ESIF presentation. Available at: [Microsoft PowerPoint - 20180808_KK.04.2.1.04_prezentacija MGIPU_PT1 \[Samo za čitanje\] \(gov.hr\)](#)

- financed from the funds of the European Regional Development Fund (ERDF) and from HBOR's own funds.
- investment ranges from EUR 100,000 to EUR 10,000,000.

Eligible beneficiaries:

- Local or regional government units.
- Municipalities, cities and counties.
- Companies, institutions, agencies and other legal entities owned or majority-owned by state or local governments.

Investment targets:

- Projects for environmental protection, energy efficiency, and renewable energy sources.
- Construction of multi-purpose, sports, tourist, socio-cultural, business and similar infrastructure.
- Investments must comply with Do No Significant Harm principle (DNSH).
- Commercial content that implies the generation of revenues from the collection of service fees.

Incentives and interest rates:

- 50:50 ratio with the possibility of writing off a part of the ERDF loan principal (up to 50% of the total loan amount) upon fulfilling predefined criteria.
- On the part of loan principal from the ERDF funds: 0.00% p.a., fixed.
- On the part of loan principal from HBOR funds: The interest rate is determined three-monthly; it stands at 3.52% p.a., fixed*.
- free from banking fees.

The call is in progress: loan applications must be received by 30 June 2024, and indicative offers must be issued by 30 June 2024.

CAPITAL MARKETS

The European Union (EU) Taxonomy is a classification system that establishes a list of environmentally sustainable economic activities. Designed to help the EU achieve its climate and energy targets for 2030 and the objectives of the European Green Deal, the taxonomy provides clear criteria for identifying environmentally sustainable investments. Its influence extends to **loans and capital markets** by guiding financial institutions, investors, and companies in allocating capital towards green projects and activities. By defining what qualifies as a sustainable investment, the EU Taxonomy aims to foster transparency, reduce greenwashing, and encourage the flow of private investment into sectors that contribute to environmental sustainability, thereby reshaping financial and investment landscapes across Europe.

On [Zagreb Stock Exchange Ltd](#), corporate bonds have seen limited use, with only a few large companies issuing bonds in the last two decades. Until 2023, Zagrebački holding d.o.o. ³⁰ raised 305 million EUR with a sustainable-linked bond tied to Energy Efficiency and Renewable Energy Sources (RES). Meritus ulaganja d.d. ³¹ raised 40 million EUR, allocating a portion to improving energy efficiency and sustainability of real estate.

The second initiative, the [Croatian Growth Investment Programme \(CROGIP\) II](#) ³², in collaboration with the Croatian Bank for Reconstruction and Development (HBOR) and the European Investment Fund (EIF), provides €52 million for climate and innovation investments in Croatia. This initiative, financed through the Recovery and Resilience Facility within the NextGenerationEU initiative, supports SMEs and mid-caps in Croatia to foster growth and innovation.

³⁰ Zagreb Stock Exchange. Available at: [3ZGH : ZAGREBACKI HOLDING d.o.o.-dosp 7/2023/A \(zse.hr\)](#) and

³¹ Zagreb Stock Exchange. Available at : [3MRU : BOSQAR d.d.-dosp 7/2027/E \(zse.hr\)](#)

³² EIF, Call for Expression of Interest, CROGIP II. Available at: [croatia-call-eoi.pdf \(eif.org\)](#)

Both capital market instruments can finance energy efficiency, provided that the investment costs are specified in the Issuer's Prospectuses and refer to limited investments with energy-saving indicators.

FINANCIAL SECTOR PERSPECTIVE (PRELIMINARY)

STAKEHOLDER VIEWS: CROATIA

Building on the identified stakeholders and Croatia's predominant reliance on EU grants and financial instruments for energy efficiency schemes, initial interviews were conducted with national and local authorities in the first quarter of 2024. These interviews were grounded in the findings from SMAFIN and SEIF, focusing on achieving the goals of the National Energy and Climate Plan (NECP) and national efforts related to green transition and energy efficiency investments.

Stakeholders were asked about challenges and strategies for achieving Croatia's National Energy and Climate Plan (NECP) goals.

The discussions highlight the importance of:

- Unified indicators and unified metrics for green transition investments from the State budget;
- National-level collaboration, innovative financing mechanisms;
- Capacity-building and technical assistance, leveraging the resources and expertise of energy agencies to align with national strategies;
- The ESCO Model is a viable alternative, but limited funding allocations have created demand exceeding supply. Increasing the total allocation for this model in future calls is necessary;
- The public sector has unique opportunities through the Green State Budget Initiative (MINFIN) and new financial instruments from the Urban Development Fund (HBOR);
- Fiscal instruments and incentives (tax reliefs, municipal contributions) have great potential for encouraging energy renovation and building renovations. However, their impact on municipal revenues needs precise projections.

CLIMATE RISK SUPERVISION IN THE CROATIAN FINANCIAL SECTOR

As part of discussions with financial institutions representatives, the following key points have been come out:

- Banks are increasing interest in financing EE and RES projects and raising “sustainable investment portfolios.”
- EU taxonomy requires Climate Risk assessment and disclosures.
- Construction companies seeking financing for energy renovations must comply with the EU Taxonomy, which has higher standards than nZEB.
- Green bonds have potential, but lower interest rates on loans are more competitive. Higher preparation costs and reporting requirements also pose challenges for issuers, particularly for municipal and public projects. Green bonds could be further incentivised through additional tax reliefs to make them more attractive

Croatian banks are supervised by the Croatian National Bank (HNB), and non-bank financial institutions by the Croatian Financial Services Supervisory Agency (HANFA). **Both supervising authorities announced their active role in monitoring the impact of climate risks on the operations of banks and other financial institutions.**

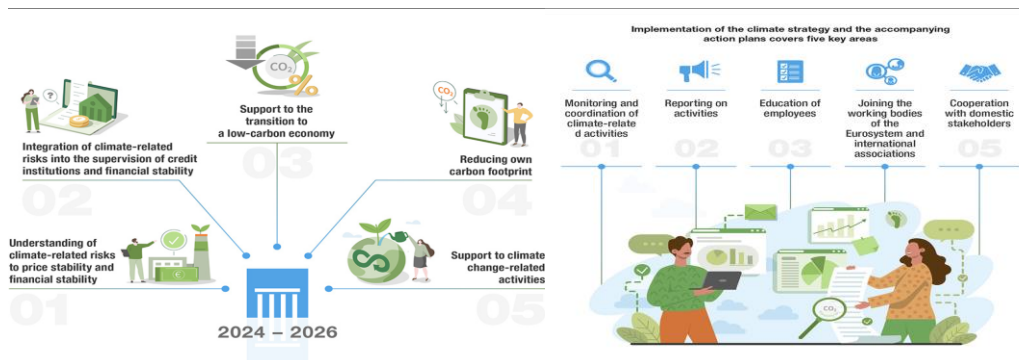


FIGURE 4: HNB CLIMATE STRATEGY, CROATIA

HNB has adopted a Climate Declaration and [Climate Strategy](#)³³ Integrating sustainability into all operations in 2024-2026 and intensifying its involvement in European and international climate activities, including joining the Network for Greening the Financial System (NGFS). HNB's Climate Declaration and Climate Strategy for the 2024-2026 includes sustainability in all its operations. This commitment to sustainability sets a strong example for financial institutions, encouraging them to adopt similar strategies.

HANFA³⁴ is exploring the relevance of climate-related risks in the domestic financial services sector and forthcoming ESG disclosures for issuers on capital markets, alternative investment funds, insurance companies and others in the non-banking financial sector. It is important because it recognises that financial decisions have real-world consequences and that investors are responsible for considering them when making investment decisions. Namely, the financial sector has a crucial role in sustainable financing because it is responsible for the distribution of capital according to initiatives and financial products whose goals are aligned with EU plans and national plans in the field of sustainability

EXPERIENCE WITH THE APPLICATION OF VARIOUS FINANCIAL SCHEMES AVAILABLE IN THE EU- CROATIA

Energy renovations in Croatia are often seen as a great example by other EU countries. Whether renovating private apartments and houses or public buildings, the Croatian way shows a good path for others to follow, especially in Central and Eastern Europe. One standout method is the ESCO model for energy renewal.

CROATIA ESCO MODEL – RENOVATION OF PUBLIC SECTOR BUILDINGS THROUGH THE ENERGY SERVICE COMPANY (ESCO)

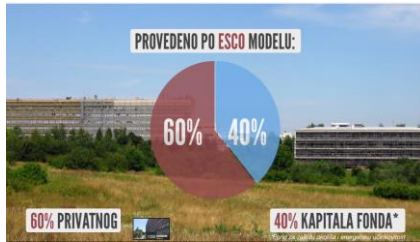
The ESCO model of renovation of public buildings in Croatia is cited³⁵ as an example of good practice, especially in the segment of hospital renovation.

³³ Climate Strategy of the Croatian National Bank, December 2023. Available at: <https://www.hnb.hr/en/o-nama/funkcije-i-struktura/hnb-i-klimatske-promjene/klimatska-strategija>

³⁴ HANFA, publication Financial stability, December 2023. Available at: [financijska-stabilnost-3_en.pdf \(hanfa.hr\)](#)

³⁵ Adrian Joyce, director of Renovate Europe for zgradonacelnik.hr, November 2023. Available at: [Komentari i mišljenja - Hrvatska je primjer najbolje prakse primjene ESCO modela u Europi - Zgradonačelnik.hr \(zgradonacelnik.hr\)](#)

Considering the substantial presence of public buildings in Croatia, where essential non-profit services such as healthcare, education, sports, and other public institutions are conducted, the ESCO (Energy Service Company) model has demonstrated remarkable success. This was evident during the period from 2014 to 2018, with a multitude of projects funded through this model.



Building upon the "Program for Energy Renovation of Public Sector Buildings 2016-2020," the Croatian Government Real Estate Agency (APN) spearheaded an ESCO-driven initiative for energy efficiency improvements in public buildings. This program, supported by the Environmental Protection and Energy Efficiency Fund (EPEEF), offered grants covering up to 40% of the investment requirements.

The implementation of the program was set up in five stages:

1. Project Identification
2. Project development
3. Public procurement (preparation and implementation)
4. Conclusion of public procurement contracts (energy performance contract)
 - The Energy Service Provider (ESCO firm) assumes the majority of risks: financing risk, construction risk (design and implementation of works), and availability risk (maintenance) of implemented energy efficiency measures.
 - The Energy Service Provider (ESCO firm) invests its funds in implementing measures, while the Client (User) pays for the delivered energy savings as compensation for the energy service.
 - Energy Performance Contract (EPC) assets that are inseparable from the building (building envelope elements, building technical system elements) are, in accordance with the regulations governing ownership, the legal property of the entire building's owner.
 - The ESCO company invests, designs, implements, and maintains energy efficiency measures in the building. The ESCO firm is the economic owner of the EPC assets during the contractual period. The economic owner is the party that bears the majority of the risks and is entitled to the majority of rewards associated with that asset.

Contract implementation 2014-2018³⁶ has shown significant success in public-private financing partnerships:

- Total of 69 completed projects and total area of 248,661.82 m²
- Resulted in 59.996.804.35 kWh/Year annual energy savings and 4.07 million EUR (30.72 million HRK)
- Co-financing participation ranged from 12,38%-71,09%
- Beneficiaries were universities, hospitals, sports centres, and prison public buildings.

³⁶ D.Vuletić, Croatian Real Estate Agency (APN), June 2022. Available at: [5_Otvoreni_dijalog_6.Vuletic.pdf \(gov.hr\)](#)

2.3. GREECE UPDATE

2.3.1. GENERAL CONSIDERATIONS

Greece, which spans 132.049 km², is situated at the southernmost point of continental Europe. According to the Hellenic Statistical Authority (ELSTAT) data, the country's actual population was 10.934.080 inhabitants as per the 2001 census. The revised 2021 Population and Housing Census results indicate that the country's resident population was 10,816,286. Of this total, 5,303,223 were males (49.0%), and 5,513,063 were women (51.0%). The country's Permanent Population was 10,432,481 individuals.

ECONOMIC PERFORMANCE

Exports, investments, and private consumption are anticipated to contribute to a slight increase in GDP growth in 2024 and 2025, following a solid but diminished economic performance in 2023. By 2025, headline inflation is anticipated to decrease to 2.1%. The public debt ratio is anticipated to continue decreasing, and the general government deficit is expected to go down further due to the muted growth of expenditures (European Commission, 2024). In 2023, the average HICP inflation was 4.2% and 3.4% in March 2024, 1 percentage point higher than the euro area average. In 2024 and 2025, inflation is anticipated to remain slightly elevated at 3.1% and 2.2%, respectively, except for energy and food (European Commission, 2024).

EU STRUCTURAL FUNDS AND INVESTMENTS

In general, the authorities think medium-term growth may be higher than the staff's expectations as global inflationary pressures and uncertainty levels decrease, and the authorities' ambitious reform agenda continues. In this context, productivity growth may be facilitated by a sustained increase in private and public investment, facilitated by structural reforms such as those incorporated into Greece 2.0 and the National Recovery and Resilience Plan (NRRP) under the Next Generation EU (NGEU) Programme. To expedite the Greek economy's structural transformation through 2026, the revised Greek NRRP plan comprises 76 structural reforms and 103 investment projects. The Greek NRRP's total envelope, as revised in 2023 by a new package of green transition reforms and investments under the REPowerEU Plan and a new request granted for EUR 5 billion in loans, amounts to EUR 35.95 billion (in 2018 values). Of this amount, EUR 18.22 billion is spent on grants and EUR 17.73 billion on loans. The total quantity of EU funds that Greece will receive in the upcoming years exceeds EUR 70 billion (in 2018 prices), as the NRRP resources are added to the EU budget structural funds under the Multiannual Financial Framework for 2021-27. The authorities anticipate that the implementation of Greece 2.0 will result in a permanent increase in real GDP of at least seven percentage points, substantially exceeding the staff's 1.3 per cent projection.

Due consideration is given to mitigating implementation risks when reforms are implemented and designated EU investment funds are directed to the economy. Therefore, it is reassuring that Greece has received EUR 14,7 billion (EUR 7,5 billion in grants and EUR 7.2 billion in loans), which is equivalent to 6.6 percentage points of GDP, and is the first EU country to have absorbed the Recovery and Resilience Facility (RRF) funds of the NGEU. This indicates an advanced state of project maturity and preparation. To date, EUR 5.2 billion in RRF grants and EUR 4 billion in RRF loans have been disbursed to the market. (IMF, 2024).

ENERGY

The draft of the revised National Energy and Climate Plan (NECP) was submitted by Greece in November 2023, while the final document is expected in June 2024. Its priority at the level of planned policies and the implementation of specific measures is the achievement of particular goals regarding the security of energy

supply, the operation of energy markets and the role of consumers, the strengthening of the competitiveness of the economy, as well as promotional activities, research and innovation.

Regarding energy efficiency, the value submitted in the draft updated NECP for the final energy consumption is 15.4 Mtoe, above the indicated target resulting from EU legislation (14.6 Mtoe). Highlights of the Commission's assessment regarding the energy efficiency draft updated NECP mention that it is informative and detailed, includes milestones and measures relevant to the long-term building renovation strategy, and reflects the 'energy efficiency first' principle.

Specifically for the building sector, the primary objective of the document is to save jobs and combat energy poverty. A significant proportion of the Recovery Fund's resources, combined with the Partnership Agreement for the Development Framework (NSRF) and other European funds, support multiple cycles of the 'Save' program, the 'Recycling Equipment' program, the "ELECTRA" program for public buildings, the program for solar water heaters at homes, as well as the 'Photovoltaics on the roof' in combination with batteries. The common axes are to increase the energy efficiency of the country's building stock, improve the quality of life, protect against high costs, and meet the country's needs with additional targeted actions for specific vulnerable groups that need support.

Regarding the tertiary sector, energy efficiency potential is considered relatively high, as it is closely related to the energy efficiency of private offices, commercial buildings and hotels. Small and medium enterprises (SMEs), tiny and micro enterprises, representing the vast majority of the Greek economy, have the greatest need to improve their energy efficiency, given the lack of internal energy managers and experts and the difficulty of accessing funding for the required interventions. The National Recovery and Resilience Plan finances the "Save at Business" action. It is part of the policies and measures of the National Energy and Climate Plan (NECP) for enterprises.

FINANCING ENERGY EFFICIENCY IN BUILDINGS (PUBLIC AND PRIVATE), SMEs, BUILDINGS OF THE TERTIARY SECTOR

NATIONAL RECOVERY AND RESILIENCE PLAN

The National Recovery and Resilience Plan 'Greece 2.0' was adopted on July 13, 2021, by the Economic and Financial Affairs Council of the European Union (Ecofin), amounting to €30.5 billion, while on December 8, 2023, its revision was approved, concerning mainly new investments and reforms under REPowerEU as well as expanding the existing loan program. The revised Plan amounts to €35.95 billion. It includes 103 investments and 76 reforms, structured around four pillars, including the new REPowerEU chapter: Green Transition, Digital Transformation, Employment-Skills-Social Cohesion, Private Investments and Transformation of the Economy. Its resources are channelled into grants and loans. They are expected to mobilise over €60 billion of total investment in the country by the end of 2026 when all projects should have been implemented.

<https://greece20.gov.gr/en/at-a-glance/>

Recovery and Resilience Facility Coordination Agency

The Recovery and Resilience Facility Coordination Agency (RRFA) is an independent Public Service under the Minister of Finance, established in October 2020. It constitutes the lead national body tasked with coordinating and monitoring the National Recovery and Resilience Plan. It is responsible for efficiently using the EU recovery funds deriving from the Next Generation EU and its fundamental instrument, the Recovery and Resilience Facility (RRF).

Recovery and Resilience Facility Loans

The National Recovery and Resilience Plan (NRRP) Greece 2.0 includes a critical measure to strengthen the country's competitiveness, that is, the provision of loans to finance private investments. For this purpose,

through the relevant loan agreement between the Greek State and the European Commission, Greece will draw from the Recovery and Resilience Facility, loans amounting to €17.7 billion, of which €16.7 billion will be channelled through commercial banks, to finance investments, by:

- Loans granted by the Recovery and Resilience Facility (up to 50%).
- Investor's own funds.
- Loans granted by the contracted commercial banks (co-financing loans).

Eligible investments must fulfil the criteria of at least one of the 5 Pillars of the Recovery and Resilience Facility loan programme: (a) Green Transition, (b) Digital Transformation, (c) Innovation, research & development, (d) Business scale up through partnerships, acquisitions and mergers and (e) Extroversion. Information on the financing of investment plans is provided exclusively through the Commercial Banks and International Financial Organizations participating in the Loan Programme of RRF, specifically through the following links:

- Alpha Bank (<https://www.alpha.gr/en/business/recovery-and-resilience-facility-rrf-loans>)
- National Bank of Greece (<https://www.nbg.gr/en/corporate/funding/financing/financing-development-programs/nbg-2-0>)
- Eurobank (<https://www.eurobank.gr/el/business/proionta-kai-upiresies/proionta-upiresies/xrimatodotiseis/anaptuxiaka/tameio-anakampsis-kai-anthektikotitas>)
- Piraeus Bank (<https://www.piraeusbank.gr/en/megales-epiheiriseis/development-banking/tameio-anakampsis>)
- Pancreta Bank (<https://pancretabank-taa.gr/>)
- Optima Bank (<https://www.optimabank.gr/business/tameio-anakampsis-kai-anthektikotitas>)
- Epirus Bank (<https://www.epirusbank.com/en/citizens/exoikonomo-2021>)
- Cooperative Bank of Karditsa (<https://www.bankofkarditsa.com.gr/en/individuals/loans/home-energy-savings-program>)
- Bank of Thessaly
- OPTIMA BANK (<https://www.optimabank.gr/business/financing/tameio-anakampsis-kai-anthektikotitas>)
- Cooperative Bank of Chania (<https://www.chaniabank.gr/idiotes/dania/exoikonomo-aytonomo/>)
- European Investment Bank (<https://www.eib.org/>)
- European Bank of Reconstruction and Development (<https://www.ebrd.com/>)

NATIONAL PROGRAMMES

1. The "SAVING 2023" program

The program was designed to implement energy-saving interventions in the residential building sector, aiming to reduce energy needs and conventional fuel consumption. The program "SAVING 2023" operates under the National Recovery and Resilience Plan Greece 2.0 framework with funding from the European Union – NextGenerationEU. The program is addressed to individuals whose main residence falls under a high energy consumption category and provides financial incentives such as:

- Interest rate: 6,50% (100% subsidised for the entire duration of the loan plus levy of L.128/75 (today set at 0.12%).
- Duration of the loan: 4, 5 or 6 years
- Amount: Up to €13.800
- Key advantages include a 100% subsidised loan rate, a grant for part of the cost of interventions, no loan expenses and a Greek State Guarantee for the first income category.

<https://www.piraeusbank.gr/en/idiwtes/daneia/stegastiko-daneio/eksoikonomw-2023>

2. "SAVING-UPGRADING for Young"

This program was designed to support young people up to 39 years old in upgrading their residences, energy-wise and aesthetically. The program "SAVING-UPGRADING for Young" operates under the National Recovery and Resilience Plan Greece 2.0 framework and provides 50% co-financing to the loan funds of "upgrading".

The program consists of two parts:

The "SAVING" part provides energy-saving interventions in the main residence, and the "UPGRADING" part offers incentives for the residence's aesthetic and functional renovation interventions in addition to the above interventions. Therefore, for participation in the "UPGRADING" part, it is necessary to participate in the "SAVING" part. In order to cover the costs of the required interventions, grants, loans, and/or funds can be combined. Financial Terms are:

- Interest rate: 6,50% for energy-saving interventions
- (fixed rate 100% subsidised for the entire duration of the loan plus levy of L.128/75 (today set at 0.12%) and 4,00% for aesthetic & functional renovation interventions
- (a fixed rate for the entire duration of the loan plus levy of L.128/75 (today set at 0.06%), relating to the Bank's funds)
- Duration of the loan: 4, 5 or 6 years
- Amount: Up to €13.500 for energy-saving interventions and up to €7.000 for aesthetic & functional renovations.
- Key advantages include a grant for the cost of interventions, a 100% subsidised loan rate for "SAVING" and Greek State Guarantee for the 1st income category, a low-interest loan for "UPGRADING", no loan expenses, no collateral, no cost of partial or complete repayment.

<https://www.piraeusbank.gr/en/idiwtes/daneia/stegastiko-daneio/exoikonomw-anakainizw-gia-neous>

3. "SAVING AT BUSINESS"

The program is designed to improve the energy efficiency of businesses in the tertiary sector. The total public expenditure of the actions of this call amounts to €176,750,000.00, co-financed by the Recovery and Resilience Fund for the period 2022-2025 and the national branch of the Public Investments Program from which a maximum of:

a) 90% of the Action Budget will be allocated to businesses operating in the Tourism sector, and b) 90% of the Action Budget will be allocated to businesses operating in the Trade and Services sector,

The above percentages are reviewed in case there are unallocated amounts.

THE DEPOSITS AND LOANS FUND

The Fund is under the supervision of the Ministry of Finance, an autonomous financial institution that serves the public and social interests. One of its scopes is supporting local and regional development by granting loans to local and regional authorities, their associations, and other public bodies. Recently, the Fund and funds from EFSI have been used to renovate public buildings through the ELECTRA national programme for public buildings.

<https://www.tpd.gr/>

Just transition programme (NRSF 2021-2027)

The "Just Development Transition" Program 2021-2027 (PDAM), with a total budget of €1.63 billion, is co-financed by the Just Transition Fund and is implemented in the context of the cohesion policy. It serves the distinct objective of the just transition, providing support to those regions and people affected by the transition's social, employment, economic and environmental impacts towards the Union's 2030 energy and climate goals and a climate-neutral Union economy by 2050.

<https://eydam.gr/>

"Environment and Climate Change" (NRSF 2021-2027)

The "Environment and Climate Change" Program was approved by the European Commission on 26/08/2022 and is the main Sectoral Program of the NSRF for implementing the country's development strategy in the main thematic areas of Energy, Adaptation to Climate Change, and Urban environment. The Program has a budget of 3.6 billion euros in public expenditure and is co-financed by the European Regional Development Fund (ERDF) and the Cohesion Fund (CF).

<https://peka-program.gr/>

NRSF-Regional Programs ROP

NSRF includes 13 Regional Programs. Each of the Greek Regions is the subject of a regional program that includes regional-scale projects and actions and utilises local advantages

<https://www.espa.gr/el/Pages/staticRegionalProgrammes.aspx>

National Energy Efficiency Fund

The Fund may serve as both a lending fund and a guarantee fund. The Fund's main activity will be to refinance loans from available funds from which loans are granted and in the context of which loan repayments are made and released.

<https://prasinotameio.gr/>

Energy Performance Contracts (EPCs)

The design and implementation of financing programs to improve energy efficiency in businesses will be intensified with the already established tax and urban planning incentives to promote actions to save energy and water in businesses. In addition, businesses' access to the required financing will be facilitated through the provision of both loans with favourable terms and guarantees. In contrast, alternative financing mechanisms will be promoted, such as the Energy Performance Contracts. The role of energy audits and the development of energy management systems in tertiary sector buildings through appropriate actions to encourage them is expected to be a catalyst.

At the same time, alternative financing mechanisms will be adopted, as indicative are the Energy Performance Contracts, especially for the case of public buildings. In this direction, a central program for the energy upgrade of public buildings through energy efficiency contracts is being planned, which will be based on the prioritisation and grouping of public buildings in order to announce targeted sub-programs based on the buildings that will be included in each group. Special financial tools will be established to support energy service companies that will undertake the energy upgrading of structures within the framework of the planned measure, such as the provision of low-interest loans and guarantees following the requirements of the state aid framework. In addition, unique financial mechanisms will be designed to strengthen the implementation of measures to improve energy efficiency in the industrial sector through Energy Performance Contracts, such as subsidising borrowing costs and facilitating access to financing for Energy Services Companies.

PRIVATE BANKS (SYSTEMIC)

1. Piraeus Bank

A. SMEs

- Piraeus Business Energy Upgrade loan for SMEs

- Medium-term loans for small and medium-sized enterprises that need financing for their energy upgrade. It combines financing and insurance solutions. This loan aims to finance eligible costs for energy upgrades of business and commercial spaces.
- Loan amount: Up to 80% of the investment.
- Interest Rate: Variable interest rate, based on Euribor 1M plus a minimum spread of 4%, depending on the collaterals.

<https://www.piraeusbank.gr/en/epiheiriseis-epaggelmaties/epiheirimatika-daneia/hrimatodotisis-fotovoltaikon/peiraios-energeiaki-anavathmisi-epixeiriseon>

HDB Green Co-Financing Loans

- Piraeus Bank, in collaboration with the Hellenic Development Bank – HDB, offers SMEs financing on preferential terms, combining a two-year subsidy of interest with partly interest-free financing, aiming at financing business investment plans that will involve green investments.
- The loans are co-financed by a Fund managed by the Hellenic Development Bank (HDB), with resources financed by the Greek State and the European Investment Bank. They are ideal for Micro, Small and Medium-sized Enterprises that wish to invest in their upgrade with preferential terms.
- Interest rate: Fixed for the entire loan duration or Variable Based on Euribor 3m
- Preferential pricing from Interest-free co-financing by 40% from HDB & 3% subsidy of the interest for the first 2 years on the rest 60% of the loan amount

<https://www.piraeusbank.gr/en/epiheiriseis-epaggelmaties/epiheirimatika-daneia/kefalaio-anaptyksis/eat-prasina-sugxrimatodotoumena-daneia>

B. RESIDENTIAL

Green Fixed-Rate Mortgage Loan for home Deep renovation with lower interest rate

- The loan is offered for the purchase, construction, completion, or radical renovation of a low-energy-efficiency home. It is offered either with a fixed interest rate for its entire tenor (3, 5, 10, 15, 20, 25, 30 years) or with a fixed interest rate for a specific initial period and then with a floating interest rate based on Euribor 1m, plus a fixed spread for the remaining duration of the loan.
- The Green Mortgage Loan is offered with an interest rate discount for the entire tenor of the loan, provided that the residence falls within one of the following energy efficiency categories: A+, A, B+, as certified by the designated Bank's engineer. Rewarding the client for a green home, the Green Mortgage Fixed Rate Loan comes with zero loan application expenses.
- Interest rate: During the period of fixed interest rate, the interest rate is fixed for the first 3 or 5 or 10 or 15 or 20 or 25 or 30 years and may be set indicatively within a range from 2.75% to 4.65%, depending on the loan characteristics and the client's transactional behaviour.

<https://www.piraeusbank.gr/en/idiwtres/daneia/stegastiko-daneio/green-stegastiko-statherou-epitokiou>

Green Euribor Mortgage Loan for Individuals

A green mortgage loan is for the purchase, construction, completion, or radical renovation of a low-energy-efficiency home. The interest rate is variable based on the Euribor 1M plus a fixed spread for the whole duration of the loan. The above spread is personalised and thus unique for each customer.

<https://www.piraeusbank.gr/en/idiwtres/daneia/stegastiko-daneio/green-stegastiko-syndedemenome-euribor>

Green Home Improvement Loan for Home with Collateral for Green Upgrades

Mortgage/home Improvement loan for interventions to upgrade the energy performance of the house and save water. The interest rate varies with the Euribor 1M rate plus a fixed spread (3.95%) for the entire term of the loan. This Loan comes with a low interest rate (approx. 6.7%) and with zero loan approval fees.

<https://www.piraeusbank.gr/en/idiwtres/daneia/stegastiko-daneio/green-episkeuastiko-me-eksafalisi>

2. Eurobank

A. SMEs

Green Co-financed Loans within the Business Growth Fund of the HDB with Collateral

Eurobank offers co-financed loans to implement investment plans for the green transition businesses. The Hellenic Development Bank- HDB finances 40% of the loan's interest and provides an additional 3% interest rate subsidy on the remaining 60% of the loan for the first two years. A collateral based on Eurobank's current credit policy is required to obtain a loan. The amount of the necessary real collateral does not exceed 100% of the loan amount due to the co-financing of the Business Growth Portfolio Fund of ETA.

This loan scheme consists of three sub-programs covering separate costs:

1. Loans for the Development of Green Mobility (Green Mobility Loans) cover recharging and refuelling infrastructure for low—or zero-emission vehicles, upgrading or expanding existing power stations into low—or zero-emission vehicle charging stations, and creating local units of production or storage of electricity through Renewable Energy Sources for the operation of recharging infrastructures.
2. Loans for Energy upgrades cover the purchase of energy-efficient equipment, R&D expenses, certifications, material recycling studies, and upgrades, provided they are related to the energy efficiency project, and ESCOs funding.
3. Loans related to Renewable Energy Sources (Loans for Green Renewable Energy) cover the purchase or installation of equipment and space configuration for the production of solar, wind, geothermal, hydroelectric, energy from biomass, etc.

The loans are provided with a variable interest rate (Euribor 3m) plus the margin for 60% of the financing and interest-free for the remaining 40%. To all interest rates, the levy of Law 128/1975 is added for the entire loan amounting to 0.60%.

<https://www.eurobank.gr/el/business/proionta-kai-upiresies/proionta-upiresies/xrimatodotiseis/anaptuksiaka/elliniki-anaptuxiaki-trapeza/prasina-sugxrimatodotoumena-daneia-eat>

Financing for photovoltaic systems (Loan or Leasing)

This loan covers up to 80% of the total cost of the investment for new photovoltaic parks (purchase and installation of the mechanical equipment, connection to the PPC network, energy infrastructure projects, etc.) or up to 100% of the total value of the mechanical equipment for leasing equipment for photovoltaic parks. The duration cannot exceed 18 years. The loan's interest rate is variable linked to Euribor 3M plus a spread formed on a case-by-case basis.

<https://www.eurobank.gr/el/business/proionta-kai-upiresies/proionta-upiresies/xrimatodotiseis/xrimatodotiseis-pagion/fotovoltaika>

Funding for net-metering

This loan is addressed to businesses with a turnover of up to 5 million euros that want to install photovoltaic systems for self-consumption. The business receives up to 80% of the total cost of investments for energy offsets, with partial capital disbursements. The loan's interest rate is variable and linked to the Euribor 1M plus a spread formed according to the collateral offered.

<https://www.eurobank.gr/el/business/proionta-kai-upiresies/proionta-upiresies/xrimatodotiseis/xrimatodotiseis-pagion/net-metering>

B. RESIDENTIAL

Personal Green Fast Loan

The Green Fast Loan is a personal loan of up to 5.000 euros issued for buying green home appliances, replacing old appliances that consume a lot of energy, or saving energy on commutes by buying an electric bike or scooter.

The interest rate of this loan varies with the Euribor 3M rate plus the levy of Law 128/1975, which is currently 0.60%. The loan features a reduced interest rate of 11.90% on the condition that at least 80% of the loan amount is used for appliances or electric vehicles. Otherwise, the conventional interest rate is 14.90%.

<https://www.eurobank.gr/el/retail/proionta-upiresies/proionta/daneia/prasina/green-fast-loan>

Loan for home energy upgrade with Mortgage or Collateral

This loan offers a fixed (3.00% for three years to 4.30% for 30 years) or variable interest rate linked to Euribor 3M plus a spread of 1.65%. A discounted interest rate option is also available if the client meets specific credit requirements. In that case, if a mortgage secures the loan, the interest rate can be equal to Euribor 3M plus a spread of 1.65%, or if it's secured by cash collateral, the interest rate is Euribor 3M plus a spread of 0.90%.

<https://www.eurobank.gr/el/retail/proionta-upiresies/proionta/daneia/stegastika/stegastiko-daneio>

Green Home Loan for energy saving with or without Collateral

Eurobank offers this loan for energy upgrade works for 2-30 years. There are two versions of the loan: If the amount of the green loan is up to €15,000, its duration cannot exceed ten years, and there is no requirement for collateral. Otherwise, a property note or cash collateral is required. The interest rate is linked to Euribor 1M with a spread of 7.25% for a loan amount up to €15,000 and 4.90% for a loan over €15,001. The interest rate can be discounted up to 1.20% if some credit requirements are met.

<https://www.eurobank.gr/el/retail/proionta-upiresies/proionta/daneia/prasina/prasino-daneio-katoikias-eksoikonomisi-energeias>

3. National Bank of Greece - NBG

A. SMEs

Funding for photovoltaic systems

NBG finances the entire cost of photovoltaic and other renewable energy projects, which can be up to 80% of the total investment cost and up to €1,000,000 per customer. The interest rate is variable based on Euribor 3M plus a margin and the L.128/75 levy. There are requirements on insurance, the Electricity Sales Contract, contractual claims with the manufacturer/contractor of the PV plant or RES project for the proper operation and performance of the investment throughout the loan, and additional collateral on a case-by-case basis.

<https://www.nbg.gr/en/business/funding-programs/investment-plan-financing/photovoltaic-parks>

Green Investments II program, in cooperation with the European Investment Bank

The objective of the program is to strengthen the access of SMEs and MidCaps to bank financing on mainly favourable terms for the implementation of investment projects that contribute to the delivery of green tagging action objectives and, in particular, the generation of energy from renewable energy sources (RES), such as solar energy, biomass, biogas, hydroelectric energy, wind energy or other RES. The maximum loan amount may be 12,5 million euros, with a total budget for each investment project of 25 million euros.

The minimum loan term is 2 years, and the interest rate is equal to Euribor 3M plus margin. There is also the possibility of privileged pricing and exemption from the obligation to pay the charge under L.128/75 (currently 0.60%).

<https://www.nbg.gr/en/corporate/funding/financing/financing-development-programs/green-investments-ii>

Green Co-financed Loans with the HDB

Investment loans with favourable terms for the implementation of investment plans in green transition projects. There are three Subprogrammes included in this financing product: the Green Mobility Loans, the Building Energy Upgrade Loans (Loans For Energy Upgrade) and the Loans for Renewable Energy Sources (Green Renewable Energy).

Due to the HDB's co-financing and the EIB's participation, the loans are offered at significantly reduced interest (variable linked to Euribor 3M plus margin). The loan can be fixed for 5, 7, or 10 years. Additionally, the bank subsidizes the interest rate by 3% for the first 2 years of the loan. The duration of the loan is from 2 to 10 years, and the amount offered is between 80.000 euros and 8 million euros.

<https://www.nbg.gr/en/business/funding-programs/development-programs/hellenic-development-bank/prasina-sygxrhmatodotoumena-daneia>

4. ALPHA BANK

A. SMEs

RRF Loans for Green Transition with co-financing from Alpha Bank

The RRF loans are part of the Greece 2.0 National Recovery and Resilience Plan, funded by the European Union – NextGenerationEU. The RRF loan term is between 3 and 15 years with a minimum interest rate of 0.35% (determined by ministerial decision). The maximum funding through an RRF loan is 50%, with a minimum of 20% own funds and a 30% minimum of co-financing loan. The RRF loan may be secured with assets and/or guarantees, whereas the co-financing loan is secured with the same collateral on a “ranking equally” basis.

<https://www.alpha.gr/en/Business/recovery-and-resilience-facility-RRF-loans/rff-loans-for-green-transition>

Green Co-Financing Loans of the Business Growth Portfolio Fund by the HDB

Businesses can receive funds to cover working capital and investments with zero interest rate on 40% of the loan through the co-financing loans of the Business Growth Portfolio Funds by the Hellenic Development Bank (HDB). What is more, an additional 3% interest rate subsidy is offered for 2 years on the remaining 60% of the loan. 40% of the loan from the Portfolio Fund is interest-free, owing to the interest-free participation of the HDB in the co-financing scheme.

For the remaining 60% of the loan, there are two options: a variable interest rate (Euribor 3M + spread) or a fixed interest rate. The Law 128/75 levy (currently at 0.60%) only applies to the interest-bearing portion of the loan.

<https://www.alpha.gr/en/Business/Development-Programmes/tameio-xartofulakiou-business-growth-fund>

Loans under the Sustainability programme of the Invest EU – European Investment Fund with Collateral

These loans offer favourable financing for working capital and investments with a fixed or variable rate based on Euribor 3M plus spread. For the final interest rate, the credit history of the client is also taken into account along with the Law 128/1975 levy (currently 0.60%). There is no commission for the EIF guarantee, while the loan is considered a “state-aid fee”, i.e. it is not included in the cumulation of aids. The repayment can reach 12 years depending on the type of financing: fixed-term working capital loans, revolving working capital facilities or investment loans.

<https://www.alpha.gr/en/Business/Development-Programmes/invest-eu-european-investment-fund>

B. RESIDENTIAL

Alpha Green Solutions Energy Saving Home

With this loan, an individual can receive funding for repairing/renovating their home and improving its energy efficiency, buy a home classified at least under energy class B+, or build/complete a home classified at least under energy class B+. The minimum amount offered is 10.000 euros with a payment period of 5-35 years. There are two options regarding the interest rate: a fixed rate for 3, 5, 10, 15 or 20 years or a variable rate linked to Euribor 3M plus a 2.50% fixed spread (plus levy under Law 128/75). Whenever the property climbs an energy class, the bank offers a discount on the spread.

<https://www.alpha.gr/en/retail/loans/green-solutions/energy-saving-house>

Alpha Green Solutions – Consumer Loan for the home

The Alpha Green Solutions – Consumer Loan offers financing for home energy upgrade measures for the building envelope (thermal insulation, replacement of window frames) and systems (installation of solar panels, heat pump or natural gas boiler). The amount offered by the bank ranges from €1.500 to €30.000, and the repayment period may range from 6 to 96 months. The interest rate remains fixed at 8.75% throughout the loan term (plus the Law 128/75, currently at 0.60%). The application-processing fee is €120.

<https://www.alpha.gr/en/retail/loans/green-solutions/alpha-prasines-lyseis-katanalotiko-daneio>

OTHER BANKS

1. ABBank

ABBank has been chosen to participate in the new co-financing scheme of the Hellenic Development Bank. The three flexible financing products on offer -namely “Liquidity Co-Financing Loans”, “Green Co-Financing Loans”, and “Digitalization Co-Financing Loans”- enable Greek SMEs to secure favourable financing terms that include, among others, an interest subsidy of up to 3% for the 1st two years and interest-free financing for 40% of the total amount of the Loan.

<https://aegeanbalticbank.com/en/business/loan-guarantee-facilities>

2. Attica Bank

ATTICA ECO SOLUTIONS – ENERGY UPGRADE OF YOUR HOME

The grant amount is from € 1,500 to € 25,000. The interest rate is fixed for the entire duration of the loan. 7,90%, plus tax (currently .60%). A reduction of 0,20 % in the nominal interest rate is granted after the presentation of the energy certificate after the implementation of the measures. The duration is from 1 to 7 years. The bank offers financing up to 100% of the amount of invoices/preferential invoices or quotations for home energy upgrade work.

<https://www.atticabank.gr/en/individuals/loans/eco-loans/attica-eco-solutions-energy-upgrade-of-your-home/>

3. Epirus Bank

The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. In the context of the long-term and practical support of initiatives to improve the environment, it participates in the "Exoikonomo 2021" program. Bank offers all the support and guidance customers need to upgrade their home energy efficiency. <https://www.epirusbank.com/en/citizens/exoikonomo-2021>

Epirusbank, in collaboration with the Hellenic Development Bank (HDB), offers SME loans that are co-financed by a Fund managed by the Hellenic Development Bank (HDB), with resources financed by the Greek State and the European Investment Bank. These loans are ideal for Micro, Small, and Medium-sized Enterprises that wish to invest in their green upgrade with preferential terms.

<https://www.epirusbank.com/en/businesses/green-co-financed-loans>

4. Cooperative Bank of Karditsa

The bank participates actively in the "Home Energy Savings Program II".

<https://www.bankofkarditsa.com.gr/en/individuals/loans/home-energy-savings-program>

5. Bank of Thessaly

The bank cooperates with the Hellenic Development Bank to implement national programs for energy efficiency in the residential and tertiary sectors. Besides, it finances the purchase of a house, the construction of a home and the reconstruction and renovation of a house, with a financing rate of up to 80%. It is repaid with monthly interest-free instalments and is secured by a pre-notification on the property.

<https://www.bankofthessaly.gr/>

6. OPTIMA BANK

In the context of the approval of the National Recovery and Resilience Plan "Greece 2.0" with the 10152/21 Executive Decision of the European Council, Optima bank participates actively and effectively in the new era for Greek entrepreneurship and society through the financing of innovative and new investments, with one aim of the transition to a green economy.

<https://www.optimabank.gr/business/financing/tameio-anakampsis-kai-anthektikotitas>

7. ProCredit Bank

ProCredit Bank supports business development with Hellenic Development Bank's new co-financed programs, which offer 40% interest-free financing and a 3% interest rate subsidy for the first two years.

<https://www.procreditbank.gr/en/for-companies/business-loans/hellenic-development-bank-programmes/>

8. PANCRETA BANK

The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. Bank offers all the support and guidance customers need to upgrade their home energy efficiency.

<https://www.pancretabank.gr/oi-prosopikes-mou-anagkes/oi-hrimatodotikes-mou-anagkes/stegastika-daneia/exoikonomo-2023/>

Business: <https://www.pancretabank.gr/en/my-companys-needs/business-funding/eu-and-national-development-programmes/recovery-and-resilience-facility/>

Pancreta Bank, in collaboration with the Hellenic Development Bank (HDB), offers SMEs loans that are co-financed by a Fund managed by the Hellenic Development Bank (HDB), with resources financed by the Greek State and the European Investment Bank. These loans are ideal for Micro, Small, and medium-sized Enterprises that wish to invest in their green upgrade with preferential terms.

<https://www.pancretabank.gr/oi-anagkes-tis-epiheirisis-mou/i-hrimatodotisi-tis-epiheirisis-mou/anaptuxiaka-programmata/prasina-sughrimatodotoymena-daneia-tou-tameiou-hartofulakiou-business-growth-fund/>

9. Cooperative Bank of Chania

The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. Bank offers all the support and guidance customers need to upgrade their home energy efficiency.

<https://www.chaniabank.gr/idiotes/dania/exoikonomo-aytonomo/>

10. Hellenic Development Bank (HDB)

The Hellenic Development Bank (HDB) is a valuable element in the integration of Micro, Small and Medium-sized enterprises (MSMEs) financing cycle through the collateralisation of the fraction of business risk not accepted by the banking system, thus amplifying the scope of viable entrepreneurial initiatives undertaken by MSMEs.

Green Co-Financing Loans

The Green Co-Financing Loans Fund was established to provide favourable terms regarding investment loans to small and medium-sized enterprises (SMEs), offering 40% of the capital interest rate-free and a two-year partial interest subsidy upon the Financial Intermediary's interest rate for the remaining 60% of the capital, for the implementation of Green Transition investment projects. Investment projects regarding Green Mobility, Energy Efficiency/Energy Upgrades, and Energy Production through Renewable Sources are supported.

The European Investment Bank (EIB) collaborates with the Hellenic Development Bank (HDB), the Greek State and the Financial Intermediaries to finance investment programs that contribute to the goals of the European Union. Learn more about the European Investments Bank (EIB) role in supporting SME's.

Cooperative Financial Intermediaries:

ALPHA BANK

EUROBANK

PIRAEUS BANK

NATIONAL BANK OF GREECE

PANCRETA BANK

ATTICA BANK

OPTIMA BANK

COOPERATIVE BANK OF THESSALY

COOPERATIVE BANK OF KARDITSA

COOPERATIVE BANK OF CHANIA

COOPERATIVE BANK OF EPIRUS

AEGEAN BALTIC BANK

PROCREDIT BANK

<https://hdb.gr/en/green-co-financing-loans/>

FINANCIAL SECTOR PERSPECTIVE (PRELIMINARY)

As part of discussions with financial institutions' representatives the following key points have been came out:

- ✓ Banks emphasised the increased necessity for accurate energy and building data regarding energy efficiency projects in general and specifically to access data related to the green footprint of their customers, including data related to the energy class and energy efficiency of the properties on which collateral has been established, to secure the relevant credit agreements.
- ✓ Bank representatives stated that all banks have to comply with taxonomy rules and that, in the coming future, harmful projects in terms of energy and environment will not be able to receive financing.
- ✓ Banks stated that there is a need for technical and financial support for the preparation of projects
- ✓ There is also need for a supportive legislative decision-making framework for energy efficiency interventions in buildings (for example, to require a relative, not an absolute majority, for energy efficiency interventions in multi-apartment buildings)

A reduction in interest rates in all categories of mortgages where renovation is also included is expected in the next period, following an agreement reached between the Greek banks, the Ministry of Finance, the Bank of Greece and the ECB. Banks will create new attractive mortgages with a fixed interest rate, while mortgages will be combined with offers and discounts on insurance premiums, consumer goods, telephone services, etc. The main points of the discussion include:

- ✓ Extension of the cap on the reference interest rate for floating rate mortgages for another year, i.e. until April 2025.
- ✓ Reduction in the reference interest rate margin so that the total interest rate on floating loans is lower than that of long-term fixed loans.
- ✓ Creation of new short-term fixed-rate mortgages, e.g. 2-3 years, with desirable pricing and offers.
- ✓ Offers new borrowers discounts on services such as mobile telephony and pay TV, purchases from commercial chains, home appliances, home insurance premiums, special financing packages for building energy upgrades, discounts on car leasing, etc.
- ✓ Reduction of the time of the overall process between pre-approval, approval and final disbursement of the loan. The building passports, the EPC, and further digitisation of the procedures are estimated to help banks initiate the procedures faster.
- ✓ Simplification of procedures to be competitive in flexibility speed, but also in the "facilitation."
- ✓ The banks have been in discussions with the government trying to find solutions to contribute more effectively to the housing policy as well as to the revival of housing credit (<https://www.ot.gr/2024/03/01/epixeiriseis/trapezes/fthinotera-stegastika-daneia/>).

2.4. ROMANIA UPDATE

2.4.1. GENERAL CONSIDERATIONS

Romania is currently facing a significant decline in its population, which is expected to exceed 15 % by 2050. According to the 2011 Population and Housing Census, the number of dwellings exceeds the number of families – approximately 8 million dwellings to 7.2 million families, with a dwelling vacancy rate of 16 % at that time. The extensive migration in recent years has led to massive depopulation of rural or even urban localities in areas that have fallen into economic decline.

The **National Long-Term Renovation Strategy** to support the renovation of the national stock of residential and non-residential buildings, both public and private, and to gradually transform it into a highly energy-efficient and decarbonised building stock by 2050 (LTRS), remains the primary policy frame for guiding cost-effective renovation measures and financing mechanisms to sustain the actions towards reaching country's strategic objectives in the field of energy efficiency.

Romania's Integrated National Energy and Climate Plan (NECP)³⁷ was updated at the end of 2023 to provide a strong energy efficiency dimension that reflects a dedicated commitment to sustainability and a greener future. The energy consumption projections for 2050 are based on the guiding principle of prioritising energy efficiency ("taking utmost account of cost-efficient energy efficiency measures in shaping energy policy and making relevant investment decisions"). The anticipated energy consumption projections indicate a targeted reduction of 5% in primary energy consumption by 2030 compared to 2019, and the final energy consumption is expected to experience a slight decrease of 2% in 2030. The long-term plan aims for a substantial reduction of 15% in primary energy consumption by 2050 relative to the 2019 level, accompanied by a more pronounced drop of 28% in final energy consumption. Compared to the reference 2030 projections established by the Primes model, Romania's energy efficiency goal by 2030 is to achieve a remarkable 46% reduction in primary energy consumption and a corresponding 45% reduction in final energy consumption. By 2050, Romania aims to lower

³⁷ https://commission.europa.eu/publications/romania-draft-updated-necp-2021-2030_en#files

its primary energy consumption by 52%, while the final energy consumption is projected to decrease further by 59% compared to the 2030 Primes model projections.

The country remains a significant beneficiary of **EU solidarity**. EU funds allocated to Romania during the 2014-2020 programming period amounted to EUR 30,8 billion, representing around 2,4% of GDP annually.

The absorption rate for the multiannual financial framework 2014-2020 increased to 97% at the beginning of 2024. The EU funds absorption capacity becomes essential in an environment affected by economic growth decelerating below the previous decade's levels. This makes it difficult for Romania to reduce domestic disequilibria and support strategic sectors to ensure a transition to a green and inclusive economy and a structural shift towards a higher value-added economy.³⁸

For the **2021-2027 Programming period**, Romania benefits from an allocation of approx. 46 billion Euros are earmarked for investments that contribute substantially to the increase in the quality of life of citizens and to the reduction of economic and social division between the regions of Europe and between the development regions of Romania. For the efficient use of the allocated European funds, Romania proposes investments that cover six significant action directions, including increasing economic competitiveness and the level of digitalisation and improving energy efficiency, increasing the use of renewable energy and developing smart energy systems, water and wastewater infrastructure, circular economy, biodiversity conservation, air quality, remediation of potentially contaminated sites, risk management, green infrastructure, urban mobility, blue economic development blue.³⁹

Romania's National Recovery and Resilience Plan allocates 28.5 billion euros to major reforms and investments to increase sustainability, resilience, and preparedness for the challenges and opportunities of the European green and digital transition. The plan, approved in November 2021, was revised on 8 December 2023 to introduce a REPowerEU chapter (detailed further under EU Financed Schemes).

Meanwhile, the national banking sector maintains its soundness, with the solvency and liquidity ratios at the highest levels compared to other European Union Member States.

The Romanian banking sector includes 34 credit institutions, eight of which are branches of foreign banks. The assets of the Romanian banking system amounted to 664.4 billion lei at the end of June 2022. Approximately 67.6% of the banking sector assets in Romania are owned by institutions with foreign capital, a downward trend compared to 91.3% recorded at the end of 2016. During the pandemic, Romania registered an increase in the degree of financial intermediation (calculated as the share of non-governmental credit in GDP), up to the level of 27%, after almost a decade in which its pace decelerated.⁴⁰

The banking system owns three-quarters of the assets of the financial system in Romania:

³⁸ Financial Stability Report, June 2023 <https://www.bnr.ro/PublicationDocuments.aspx?icid=19968>

³⁹ MIPE Report, <https://mfe.gov.ro/stadiul-absorbtiei-fondurilor-ue/>

⁴⁰ Financial Stability Report, June 2023 <https://www.bnr.ro/PublicationDocuments.aspx?icid=19968>

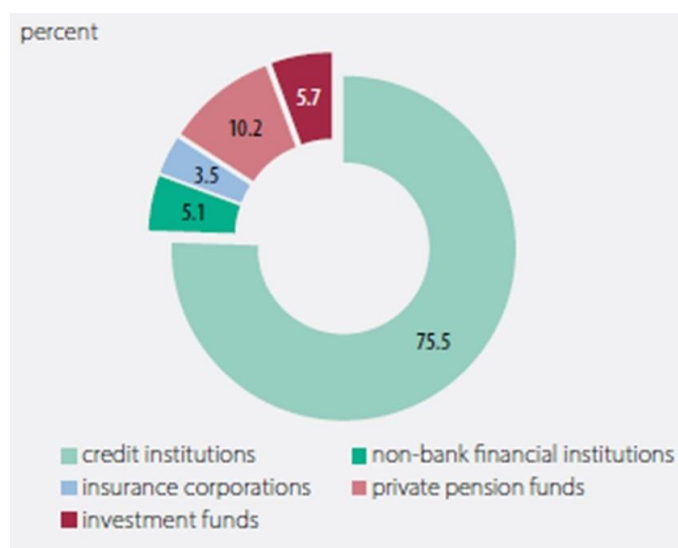


FIGURE 5: DISTRIBUTION OF ASSETS IN THE ROMANIAN FINANCIAL SYSTEM

Source: National Bank of Romania

Leading banks in Romania in 2023 are Banca Transilvania S.A., Banca Comercială Română S.A. and BRD – Groupe Société Générale S.A.⁴¹

In September 2023, the green loans amounted to almost lei 3 billion and accounted for 1.6 per cent of banks' corporate loan stock. The breakdown shows that nearly half of them are directed towards green buildings (47%), followed by electricity, heating and cooling systems, including renewable energy (24%) and energy efficiency (10%). Firms in construction, real estate and services finance their investments in green buildings through credit, whereas trading companies access green loans primarily for energy efficiency⁴².

2.4.2. FINANCING ENERGY EFFICIENCY IN BUILDINGS (PUBLIC AND PRIVATE), SMEs, BUILDINGS OF THE TERTIARY SECTOR

The clear need for investments in certain sectors such as renovation, infrastructure, energy, and transport. Within the NECP⁴³, Romania partially addressed the EC recommendation on investment needs and mechanisms and funding sources to leverage them. Some gaps remain in the investment needs, and there is no detail on investments generated by the ETS allowances revenues. The NECP lacks information on mobilising private sources to cover investment gaps in amounts and modalities. EC specifically observed that further support for the renovation of public and private buildings, including the residential sector with a focus on affordable and social housing, could be provided through increased public funding and by leveraging EU and national budgets with private money, combining grants, lending, guarantees and loan subsidies.⁴⁴

The NECP indicates that three scenarios have been analysed to support the long-term renovation strategy of buildings. Romania indicates intentions to go beyond a 3-4% renovation rate (the baseline is 0.5%).

The LTRS is the basic document that supplies information on building renovation scenarios.

⁴¹ <https://economy.ro/topul-bancilor-din-romania-si-cotele-lor-de-piata-banca-transilvania-lider-detasat-cu-aproape-20-institutiile-bancare-cu-cele-mai-mici-procente-au-cate-001.html>, primary source BNR

⁴² Financial Stability Report, December 2023, <https://www.bnr.ro/PublicationDocuments.aspx?icid=19968>

⁴³ Romania's National Plan on Energy and Climate Change 2021-2030

⁴⁴ European Commission, Staff Working Document, Final Assessment of the final national energy and climate plan of Romania, October 2020 SWD (2020) 922

The Romanian stock of buildings contributed 41,64% to the final consumption of 22,86 Mtoe, as estimated for 2019, and an estimated consumption of 9,52 Mtoe (LTRS).

The intermediate scenario 2, preferred at this stage by the Romanian authorities, was defined with a more gradual increase of renovation rate for each decade until 2050. The first decade focuses more on MABs (~40%) as they offer the highest energy savings and CO₂ reduction potential. This scenario would lead to a reduction of 0,83 Mtoe in final consumption in 2030 and 3,38 Mtoe in 2050, a 66% reduction compared to the same year in the baseline scenario and a reduction in CO₂ emissions of 2,34 million tonnes by 2030. The population living in these renovated buildings reaches 2,66 million.

TABLE 2: DATA ON THE WORKING SCENARIO FOR BUILDING RENOVATION IN ROMANIA⁴⁵

Building types	Possible main categories	Area, million m ²	Buildings, units	Investment, EUR million
Residential – Individual houses	Rural	10,57	162.475	1.736,87
	Urban	9,39	102.120	1.449,88
Residential condominium	<=P+4 floors	21,62	21.124	2.791,47
	>P+4 floors	44,04	23.471	4.877,24
Educational	Schools	4,24	4.361	874,84
Healthcare	Hospitals	1,61	161	318,33
	Other	1,07	14.324	192,52
Administrative/ office	Administrative buildings	1,35	1.539	236,55
Commercial buildings	Hotels	0,04	73	9,38
	Restaurants/Coffee shops	0,12	2.394	27,05
	Shopping	1,31	7.686	269,40
Total		95,36	339.726	12.783,53

2.4.2.1. FINANCING SCHEMES WITHIN EUROPEAN PROGRAMMES

REPOWEREU (CHAPTER 16 OF ROMANIA'S NRR)

The component was introduced at the end of 2023 to increase the resilience and energy independence of Romania by increasing the share of electricity production from renewable sources (mainly solar and wind) both for individuals and economic operators, **decarbonising the residential sector by increasing the energy efficiency of buildings**, the development and digitisation of transport capacities, as well as the qualification of human resources about the specific requirements of the renewable energy sector.

The new chapter benefits from a total allocation of millions of Euros for different reforms and/or investments.

Main reforms include the establishment of single information counters (**One Stop Shop—OSS**) to provide energy advisory services for prosumers in the fields of energy efficiency and energy production from renewable sources (allocation of 431,438 euros).

They provide investments to increase energy efficiency in public buildings (300 million euros) and a scheme to award vouchers to improve energy efficiency within individual households (560 million euros).

⁴⁵ Romania Long Term Renovation Strategy, approved by GD no.1.034 /27 November 2020, <http://legislatie.just.ro/Public/DetaliiDocumentAfis/236612>

THE MODERNIZATION FUND

In Romania, the Modernization Fund will finance investments from the priority sectors identified by the Ministry of Energy and will be implemented through key programs within which one or more investment areas are defined. The program will contribute to mitigating the challenges faced by Romania in transitioning from coal-based energy sources. At the same time, to achieve the targets assumed by PNIESC 2021-2030 regarding energy and climate for 2030 and a climate-neutral Union economy by 2050, in parallel with the creation of new electricity production capacities with low carbon emissions, for decarbonisation of the industry, the best available emission reduction technologies will be implemented, as well as the substantial transformation of technological processes, including through solutions for capturing and storing carbon and increasing energy efficiency in industry.

During the first meeting of SMAFIN EXP WG, the representative of the Ministry of Energy specified that the launch of the first calls for projects under the vital program for heating networks (transport and distribution) and the key program for high-efficiency cogeneration (source) will include type A projects for applicants with mixed profile and type B for natural monopolies-UAT. The final consumer is not covered by those calls (according to the law, the applicability is up to the point of connection); the hydraulic balancing will be clarified at later stages, considering that it involves additional costs.

JUSTTRANSITION (INTEGRATED PROJECTS)

The Just Transition Mechanism (JTM) is a key tool developed by the EU to ensure the transition towards a climate-neutral economy happens in a fair way, leaving no one behind. It provides targeted support to help mobilise around €55 billion over the period 2021-2027 in the most affected regions to alleviate the transition's socio-economic impact.

In Romania, one of the programs implemented by the Ministry of Investments and European Projects supports environmentally sustainable economic diversification through projects that integrate different funding opportunities available. One of the leading initiatives is the Energy Community Jiu Valley⁴⁶ planning for energy efficiency measures and renewable energy production (prosumers) for public consumption. The approach is based on blending funding from different EU programs and European Financial Institutions.

2.4.2.2. NATIONAL FINANCING SCHEMES

GARANT CONSTRUCT⁴⁷

GARANT CONSTRUCT is a programme for projects to improve energy efficiency, green energy investment and alignment with the environmental objectives implemented by SMEs and small enterprises with medium market capitalisation in the construction sector and by territorial and administrative units, and has two sub-components:

The sub-component supporting investment projects for SMEs and for small mid-caps in the construction sector goes under **SME INVEST PLUS programme**.⁴⁸ The component aims to provide government guarantees of up to 90% of the financing SMEs obtain from credit institutions for improving energy efficiency, supporting investments in green energy, and aligning with environmental objectives. Companies in the construction sector are eligible, including start-ups, small businesses with mid-market capitalisation, architects or individual architectural offices and territorial administrative units (municipalities, cities, communes). The maximum value of each financing granted to a beneficiary cannot exceed 1 million Euro for loans/credit lines for financing

⁴⁶ <https://www.valeajiuului.eu/proiecte-integrate>

⁴⁷ https://www.cnsmro.ro/res/ups/NCMO-Report_2022.pdf

⁴⁸ <https://contragarantare.ro/garant-construct/>

working capital and 2 million Euro lei for investment loans, with a maximum guarantee percentage of 90%. The maximum duration of financing is 72 months in the case of investment loans and 36 months in the case of loans/credit lines for working capital without the possibility of extension.

The other sub-component is aimed at supporting small investment projects for territorial and administrative units, which imply financing some construction activities.

NATIONAL PROGRAMME FOR IMPROVEMENT OF ENERGY PERFORMANCE IN RESIDENTIAL BLOCKS (THE THERMAL REHABILITATION FUND)

According to the Urgency Governmental Ordinance nr. 18/2009 and further regulations. The main objectives of this programme are to reduce the annual specific consumption for heating below 100 kWh/m²/year and improve indoor environmental quality. The state budget covers 50% of the cost, and 40% of the price is covered by the local authority (municipality) budget (max 30%) and the owner-association (not less than 10%). The target buildings of the programme are multi-store blocks built between 1950 and 1990.

To facilitate the implementation of the multi-annual national program, the digital platform investitii.mdlpa.ro is made available to the local public administration authorities of the administrative-territorial units and administrative-territorial subdivisions.

The programme has already resulted in over 70,000 apartments for which the thermic rehabilitation has been finalised throughout the country. It has been extended for the period 2019-2020 with a total allocated budget of EUR 10.4 million for a three-year period.⁴⁹

THE DISTRICT HEATING 2006-2020 HEAT AND COMFORT PROGRAMME

It provides investment funds for the modernisation, rehabilitation, refurbishment and expansion or establishment of central heating systems for localities. The local public administrations with centralised thermal energy supply systems can benefit from the non-reimbursable co-financing of investment projects. The resources come from:

- a) the state budget through the budget of the Ministry of Public Works, Development and Administration (part from UE Cohesion Fund);
- b) the budget of the Environmental Fund, within the amount of RON 400 million;
- c) local budgets.

For new projects, the co-financing quota from the ministry budget is a maximum of 85% of the total eligible expenses of the project, and the contribution from the local budget will be a minimum of 15%.

For the completion of the started projects, the co-financing quota from the ministry budget is a maximum of 70%, with a minimum of 30% contribution from the local budget.

During the period 2008 – 2017, 163 objectives in 47 cities were financed, with 392 million RON going to the state budget. For 2019-2021, 25 objectives in 18 cities are considered.

THE MINISTRY OF ENERGY PROGRAMMES

- Programme for Small and Medium-sized Enterprises and the HORECA field

⁴⁹ European Commission, Commission Staff Working Document, Country Report Romania 2020, European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation, SWD (2020) 522 final

This Programme finances SMEs and HORECA companies for the installation of PV systems with an installed capacity between 27kWp and 100kWp and at least one recharging station of at least 22kW for electric vehicles, with at least two charging points. PV panels can be mounted on the roof or on the ground. Financial support is up to 100% of eligible expenses. Non-reimbursable financing is granted in a maximum amount of EUR 100.000. There is an advance of up to 30% of the eligible approved expenses.

ELECTRIC UP programme⁵⁰

The Ministry of Energy is preparing to launch the second edition of the "ELECTRIC UP" program, which has a planned budget of 9 million EURO for small and medium enterprises and Romanian legal entities that carry out activities in the field of HORECA.

For the new edition, the amount of non-refundable financing increases from 100 thousand euros to 150 thousand euros, and the installed power for financed photovoltaic panels increases to 150 kW, the development of recharging stations for electric cars is financed, storage is encouraged, and financing alternative heating-cooling systems is introduced as a novelty. At this stage, the Program is addressed to Small and Medium Enterprises and economic operators active in the Horeca field, which can benefit from the financing of an investment project for the installation of photovoltaic panel systems for the production of electricity with an installed power between 27 kWp and 150 kWp required for self-consumption, recharging stations of at least 22 kW for electric and plug-in hybrid electric vehicles, and an alternative heating/cooling system. The de minimis aid granted can reach the maximum value of 150,000 euros/beneficiary and represents financial support of up to 75% of eligible expenses, the remaining 25% representing co-financing from the beneficiary's sources. The investment project subject to the funding request must contain a system of photovoltaic panels with an installed power of a minimum of 27 kWp and a maximum of 150 kWp necessary to ensure own consumption and the other installed equipment, respectively a recharging station of at least 22 kW for electric vehicles and plug-in hybrid electrics and an alternative heating/cooling system. The amounts settled will be directly proportional to the installed power.

THE AFM - THE ROMANIAN ENVIRONMENT FUND ADMINISTRATION PROGRAMME

Several smaller programmes, presented below, were financed by AFM⁵¹ In the past. The fund is supplied by the revenues from the trade of the greenhouse gas emission certificates collected at the Environmental Fund.

Currently, AFM is managing one programme for energy efficiency in public buildings and improving the quality of the environment by reducing greenhouse gas emissions, reducing annual primary energy consumption and promoting the use of renewable energy sources. The object of Program aims to modernisation public buildings through investments to increase their energy performance, stimulating the use of renewable energy sources, implementing energy management systems to improve energy efficiency and monitor energy consumption, and comply with the requirements regarding indoor air quality. The program was launched at the end of 2023, with a multi-annual foreseen financing in one or several sessions and maximum allocation between 1.2-4.8 million Euro according to applicant profile (commune, municipality, city, etc.)

- Programme on increasing energy efficiency and intelligent energy management in public buildings for schools – AFM

During a financing session, the maximum amount that can be requested is:

- a) RON 1.500.000 for cities with a population of up to 5.000 inhabitants;
- b) RON 3.000.000 for cities with a population of over 5.001 inhabitants.

⁵⁰ Ministry of Energy, Romania website, <http://energie.gov.ro/electricup/>

⁵¹ Environment Fund Administration- Romania website, https://www.afm.ro/programe_finantate.php

The financing is granted in a maximum of 90% of the eligible expenses of an investment objective.

The activities that can be financed:

- thermal rehabilitation of the building envelope elements, of the heating system/of the hot water supply system;
- installation of alternative systems for the production of electricity and / or heat;
- installation/rehabilitation/modernisation of air conditioning and/or mechanical ventilation systems to ensure indoor air quality, rehabilitation/modernisation of lighting installations in buildings;
- installation of integrated energy management systems for buildings, etc.
- Energy-Efficient House programme - AFM

The aim is to reduce the energy consumption of Romanian households and, thus, to diminish the level of greenhouse gas emissions in existing single-family homes situated in a building consisting of a maximum of 3 levels. Eligible costs include installation of new windows with a low heat transfer coefficient, insulating materials for exterior walls, purchase, assembly and commissioning of a more efficient central heating system, solar panels, improved ventilation systems, lighting fixtures with LEDs, motion sensors, new valves, and pipes, etc.

The maximum grant is EUR 14.400. The maximum duration for each project is 18 months. Upon completion, the Environmental Fund Administration will provide 60% of the value of the improvements after a final audit of the building. Around 13.000 households will benefit from this scheme in the first financing round.

■ Upgrade your home appliances & equipment Programme – AFM

In 2021, a new edition of the national "Scrap for appliances" programme for home appliances and equipment will be launched. This concept involves replacing used equipment with more energy-efficient ones. The budget for vouchers with values between RON 200 and 500 (EUR 40 to 100), depending on the type of appliance purchased, is RON 40 million (c.a. EUR 8 million).

The voucher amount is deducted from the final invoice value, and the old equipment is handed over when the new one is delivered. The new appliances must follow certain quality specifications and have a minimum energy efficiency rating of A or, in some cases, A++. A maximum of 50% of the value of the new equipment can be financed through vouchers.

In 2019, the "Scrap for Appliances" programme also benefited from a budget of RON 40 million (EUR 8,12 million). Official data on this programme shows that 49.118 applications for 89.193 vouchers were approved last year, and more than 60.000 old/used/inefficient equipment was taken out of service.

2.4.2.3. FINANCIAL SCHEMES INVOLVING SPECIFIC COMMERCIAL LOANS

THERMAL REHABILITATION PROGRAMME FOR RESIDENTIAL BUILDINGS FINANCED BY BANK LOANS WITH GOVERNMENT GUARANTEE

This scheme provides building owners access to loans for thermal rehabilitation. The loans are supported by a government guarantee, which generates lower interest rates for the lenders. The loan amount is limited to EUR 400 for dwellings in residential blocks and EUR 1.600 for individual residences, while the beneficiaries should finance at least 10% of the costs. Eligible buildings must have been built before 2000, while allowed measures include thermal rehabilitation of the building envelope and replacement/repair of the heating system.

ROMANIAN FUND FOR ENERGY EFFICIENCY – FREE

A revolving EUR 7 million loan fund, funded by GEF and implemented by the World Bank, is for EE projects in the industry and public sectors. It commercially finances companies in the industrial sector and other energy

consumers to facilitate the adoption and use of energy-efficient technologies. The interest is negotiable, depending on the project's attractiveness, the loan's value, and the liquidity of the guarantees. The minimum loan is USD 100.000.

Priority is given to the financing of energy efficiency projects with high potential. During the 2003-2023 period, FREE initiated 53 financing contracts with 43 different clients for a total value of 30.6 million USD, contributing to the completion of investments totalling 87.5 mln. USD. The estimated annual energy savings generated by FREE contracts are 73,940 tep, while the estimated annual reductions of CO₂ greenhouse gas emissions are estimated at 200,583 tons.

THE GREEN MORTGAGE PROGRAMME

The Romania Green Building Council (RoGBC) developed together with Raiffeisen Bank's (*Casa Ta Verde- Your Green Home*⁵²) and Alpha Bank's (*Alpha Green Credit*⁵³) this innovative green home certification. The certification seeks to assess and recognise top-performing residential projects using sustainable construction principles. A green mortgage is a loan at discounted interest rates when purchasing buildings certified as "Green Home" by RoGBC. The programme creates successful cooperation between a bank, the investor/developer of the building, the home buyer and the RoGBC, where the latter ensures that residential housing projects meet energy performance standards and quality criteria. The scheme overcomes the market barrier that hampers the construction of greener, more energy-efficient homes.

The programme in Romania includes over 30 residential projects totalling over 6.500 residential units. In 2019, RoGBC joined 16 organisations – including Green Building Councils, national energy agencies, academic institutions, and other green expert organisations to form the SMARTER Finance for Families consortium to develop and implement the Green Mortgage programme in 11 new European countries.

TABLE 3: EXAMPLES OF COMMERCIAL PRODUCTS PROVIDED BY THE ROMANIAN BANKS:

Bank Name	Value (max) lei	Period	Upfront Payment	Interest	Scope
CEC	Authorities: 100% of the project value (zero own contribution). Private beneficiaries: the total value of the project minus their own contribution (min 15% - for complex projects/construction works, 1-5% - for simple purchases)	15 years	0	N/A	•Photovoltaic panels •Thermal insulation of roofs and buildings •Waste recycling •Purchase of new equipment, •Photovoltaic farms (parks) •Cars, Freight vehicles with low CO₂ emission
ProCredit Bank	150.000	5 years	0	IRCC + 3,28%* or 10%* for contracting 150.000 LEI	•Photovoltaic panels
Banca Transilvania		10 years	10%	N/A	•Photovoltaic panels
Libra Bank	70.000	5 years	N/A	6,50% + IRCC*	•Photovoltaic panels

⁵² Raiffeisen Bank Romania website, Casa Ta Verde, Available at: <https://www.raiffeisen.ro/persoane-fizice/produsele-noastre/credite/credite-imobiliare/credit-imobiliar-casa-ta-verde/>

⁵³ Alpha Bank Romania website, Available at: <https://www.alphabank.ro/persoane-fizice/credite/credite-locuinta/alpha-housing-oferta-green>

Raiffeisen Bank	• 20.400 RON for unsecured loans • Over 20.400 RON for secured loans	6 months	• 0% if the maximum financed amount is up to 20.400 RON • 10% of the financed assets' value If there is no grant component offered	N/A	• Photovoltaic panels
BRD	130.000		N/A	Fixed interest rates ranging from 8.75% to 15.79%	• Electric Cars • Equipment that uses renewable energy • Green equipment for personal mobility • Equipment that improves the energy efficiency of the home
ING	125.000	5 years	N/A	7.99% - 14.81% per year	Acquisition of electric car, solar panels, and photovoltaic systems
BCR	Up to 200,000 RON for SMEs or up to 1,200,000 RON for NGOs	10 years	N/A	N/A	• Acquisition of energy-efficient properties for current operations • Rehabilitation or modernization of buildings through insulation • Purchase of photovoltaic panels, heat pumps - Acquisition of production equipment with lower energy consumption • Organic farming, etc
BCR	Energy Efficiency Credit • The Energy Efficiency Credit offered by BCR, is a specialized financing solution designed to support investments in the modernization of equipment, technological lines, and thermal rehabilitation of buildings. This includes funding for high-efficiency cogeneration and trigeneration installations. This new credit solution addresses the critical need to reduce carbon dioxide emissions from both private and state-owned company operations, as well as to decrease overall pollution levels. Additionally, it aims to enhance the economic efficiency of energy generation processes. To achieve better replication of the Energy Efficiency Credit model, financial institutions should focus on offering stronger financial incentives and lower interest rates.				
Alpha Green	Between 5000 – 400.000 EURO or RON equivalent	5 ani – 35 years	N/A	N/A	• Buy a house / holiday home certified "green" by RoGBC; • Build a house/vacation house that will be certified "green" upon completion by RoGBC • Refurbish arrange or strengthen a building using "green" materials.

ESCO AND EPC

The Ministry of Energy finalised the ESCO and EPC regulation framework in Romania in December 2023, when the government approved some measures necessary to perform the activities of companies providing design and energy performance services. On February 16, 2024, 2 models for the service framework contract were published on the Ministry website for public debate. Further, SMAFIN EXP WG and RT activities will capture further implementation challenges to overcome potential bottlenecks.

2.4.3. FINANCIAL SECTOR PERSPECTIVE (PRELIMINARY)

The National Bank of Romania is monitoring the impact of climatic risks on the banking sector.

According to their survey conducted in 2023⁵⁴ on supporting green financing, there is a growing interest from both credit institutions and non-bank financial institutions (NBF) for the funding of green projects:

Most of the responding institutions in Romania (90% of the credit institutions and 82% of NBF) indicated they have launched or are considering launching green products in the future (in the next three years). Although the definitions of green products differ at the level of the responding institutions, most present characteristics and processes aligned with the European Union Taxonomy or are in line with the Green Loans Principles (developed by the Loan Market Association).

More than half of the responding credit institutions have integrated climate change into their strategy documents, and a large proportion will do so in the next three years. The situation is similar in the case of NBI. Usually, the strategy is defined at the group or both group and local levels.

Banks have made more significant efforts regarding the internal organisation and consulting services offered to clients (e.g., providing expertise to address climate challenges, developing innovative solutions and collecting data on client GHG emissions).

Among the climate-related risks that impact the activity of financial institutions, the most important physical risks are extreme weather and temperature increases, and from the transition risk perspective, the abandonment of fossil fuels and the price of carbon emissions.

The level of involvement of credit institutions is increasing compared to the previous assessment (end of 2020). The number of institutions that have not considered including climate change in their strategy, nor do they plan to do so, has decreased from around 30 per cent in 2020 to 7 per cent today.

The most pressing challenge faced by financial institutions in Romania in implementing and developing green products remains data availability. This is closely followed by instability in the legislative framework and the lack of necessary knowledge in the field. This series of challenges is similar to the opinions of European financial institutions that consider the most pressing problems related to (i) the lack of solid exposure assessments of banks to climate risks, (ii) gaps in the development of appropriate approaches to data governance and uniform quantification of climate risks and indicators performance and (iii) the lack of a robust stress testing framework for environmental and climate risk.

To solve the identified obstacles, the proposals of financial institutions addressed to the competent authorities refer to:

- The establishment of a roadmap for sustainable development (including guidelines, procedures, etc.) at the national level.
- Cooperation between the authorities, the private sector and civil society to ensure efficient and sustainable use of the available funds related to green projects – the establishment of a permanent working group to

⁵⁴ <https://www.bnr.ro/Analize-BNR-27393.aspx>

contribute to the development of the market by increasing awareness of the importance of financing green projects and which, at the same time, provide technical assistance and eventual support through user-friendly online platforms.

- creating extensive training and education programs for all parties involved;
- Ensure transparency, stability, and predictability in the legislative framework, including funding policies.
- the creation of a **public database with energy efficiency certificates for all housing and building stock** and a platform with information on companies' emissions and the presentation of their position about sustainable development scenarios.
- reducing financing procedures by simplifying the eligibility criteria for specific categories of green investments (e.g. green mortgages/green real estate developments/investments in green technologies that do not require complex evaluations);
- granting bonuses or adopting capital incentive schemes to encourage green financing.

Other relevant info⁵⁵:

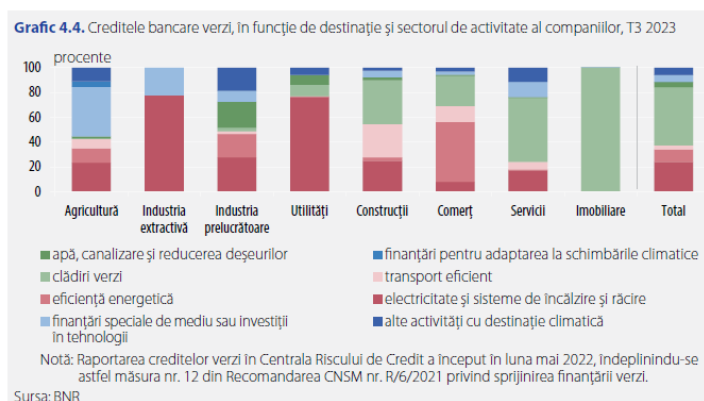
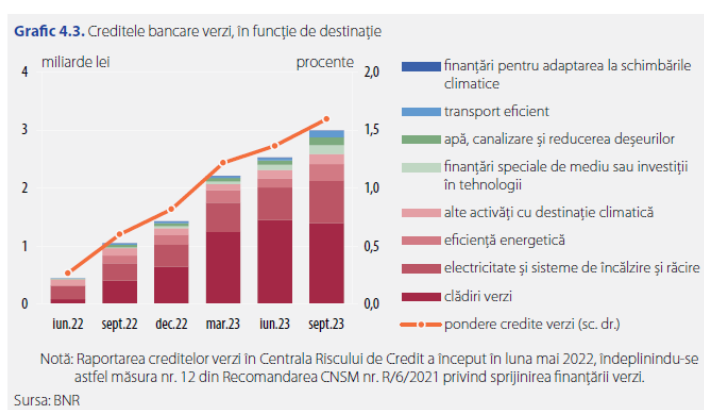


FIGURE 6: GREEN CREDITS BY DESTINATION AND COMPANY ACTIVITY

⁵⁵ Tabloul de monitorizare a riscurilor climatice asupra sectorului bancar din România - 2023, <https://bnro.ro/PublicationDocuments.aspx?cid=31565>

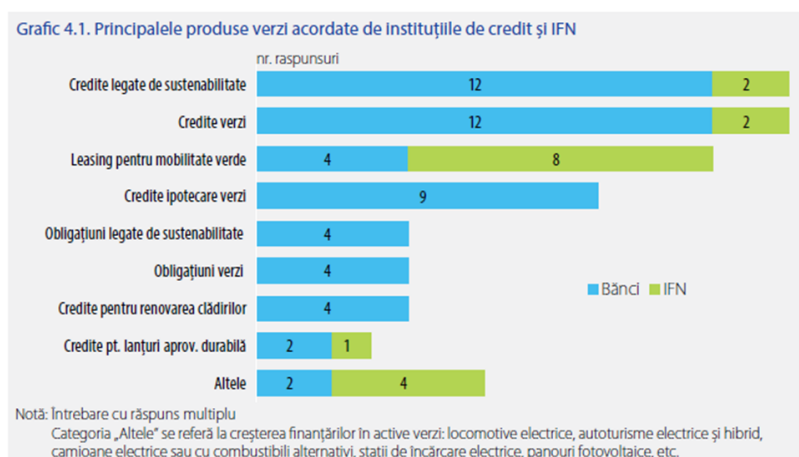


FIGURE 7: MAIN GREEN PRODUCTS BY CREDIT INSTITUTIONS AND IFN

The most pressing challenge faced by financial institutions in Romania in implementing and developing green products remains **data availability**. This is closely followed by **instability in the legislative framework** and the **lack of necessary knowledge in the field**.

The financial sector in Romania shares the opinions of European financial institutions⁵⁶. Considering the most pressing problems related to (i) the lack of solid exposure assessments banks to climate risks, (ii) gaps in the development of appropriate approaches to data governance and uniform quantification of climate risks and indicators performance and (iii) the lack of a robust stress testing framework for environmental and climate risk.

2.5. SLOVENIA OVERVIEW

2.5.1. GENERAL CONSIDERATIONS

Slovenia, with a population of about 2.1 million, saw a 2.4% increase in inhabitants between 2010 and 2020. In 2023, the GDP per capita was approximately EUR 29,750. The GDP growth rate for Slovenia was 2.3% in the first quarter of 2024, driven by strong domestic demand and significant contributions from construction investment. In 2022, Slovenia's total primary energy supply was 4.81 Mtoe. The final energy consumption (FEC) in 2022 amounted to just over 201,000 TJ. The main sectors contributing to Slovenia's FEC in 2022 were transport (41%), the manufacturing and construction industry (25%), households (22%), and services (9%). Between 2010 and 2020, Slovenia's FEC decreased by 11.8%.

The occupied residential building stock is estimated at 778,500 buildings, covering nearly 65 million square meters. Notably, 84% of these residential buildings were constructed before 2002, highlighting the potential for energy efficiency improvements in older structures. Public buildings in Slovenia have a total floor area of 9.7 million square meters, out of which central government buildings account for 0.9 million square meters and wider public sector buildings 8.8 million square meters.

[National Energy and Climate Plan of the Republic of Slovenia](#)

The National Energy and Climate Plan (NECP) of Slovenia is a comprehensive policy document guiding energy and climate strategies across all sectors until 2030. Structured around five dimensions—greenhouse gas reduction, energy efficiency (EE), energy security, internal energy market, and research, innovation and competitiveness — it encompasses goals and measures about buildings. NECP measures for financing building renovation and construction include:

⁵⁶ ECB Good Practices for Climate-related and Environmental Risk Management – Observations from the 2022 Thematic Review, November 2022

- Renovation of cultural heritage and special buildings.
- Energy Performance Contracting (EnPC).
- Support schemes for efficient household energy use, particularly for vulnerable groups.
- Financial incentives for EE and renewable energy adoption in residential buildings.
- Financial instruments for buildings with multiple owners.
- Rebate schemes for household EE: Eco Fund soft loans and incentives from other green loan providers.
- Incentive allocation between owners and tenants in multi-apartment buildings.
- Establishment of a guarantee scheme.
- Rebate schemes for EE in the public sector.
- Non-repayable investment incentives for public building energy renovation, prioritising EPC projects.
- Development of a financing plan for sustainable building renovation.

[Long-term Renovation Strategy for 2050](#)

The Long-term Renovation Strategy for 2050 (LTRS 2050) outlines a comprehensive plan for building renovation. By 2050, it aims to achieve net-zero emissions by extensively renovating buildings with low-carbon materials and renewable energy technologies. The strategy also prioritises new construction and renovations to minimize emissions throughout buildings' lifecycles while ensuring safety, health, and productivity. LTRS 2050 also addresses seismic considerations in broader building renovation. The strategy identifies public legal entities within the central government and broader public sectors to drive energy renovation efforts. This involves assessing building areas they own and use, focusing on renovating a proportion of the total floor area in the central government sector. The strategy thoroughly reviews the national building stock through statistical sampling, providing insights into the country's building conditions. It prioritises the development of cost-effective renovation approaches tailored to diverse building types, considering factors like category, location, and climate.

Aligned with the National Energy and Climate Plan, the overarching decarbonisation goals of the LTRS 2050 in the building sector by 2030 include reducing greenhouse gas (GHG) emissions in buildings by at least 70 per cent compared to 2005 levels and ensuring renewable energy sources (RES) represent at least 2/3 of energy consumption in buildings. Until 2030, the focus will be on comprehensive energy renovations, considering the building's general construction-technical and functional condition, reducing energy poverty, and implementing cost-effective solutions.

[Energy Efficiency Act](#)

The Energy Efficiency Act aims to achieve several objectives in EE and efficient energy utilisation, including reducing energy consumption, enhancing EE, ensuring energy security, promoting efficient energy conversion, and transitioning towards a climate-neutral society with low-carbon energy technologies. It also focuses on providing energy services, maintaining quality internal environments in buildings, and raising awareness among end-users about the benefits of EE. The Act also emphasises increasing EE across all stakeholders, particularly in the public sector and ensures social cohesion. To meet energy-saving targets, the Act advocates for various energy services and EE measures, including utilising RES for heat or electricity production in households, industry, public, and service sectors, implementing EE measures in buildings, promoting EE measures in transportation, enhancing the efficiency of district heating systems and implementing energy audit programs to assess and improve energy usage. The energy performance certificates (EPC) provisions were given in the Energy Act for new and existing buildings and for public buildings and transposed to the Energy Efficiency Act.

[Rules on efficient use of energy in buildings](#)

This Regulation outlines technical requirements for constructing almost zero-energy buildings to enhance EE. It covers aspects such as thermal envelope properties, technical building systems, heating, cooling, ventilation, hot water preparation, lighting, automation, control, and RES. Key points include specifying technical requirements, along with methodologies for calculating energy performance and specific transmission heat losses. It also

mandates maximum annual energy usage for heating and cooling. It aligns with [Technical Guidelines on the efficient energy](#) use issued by the Ministry of Environment and Spatial Planning.

[Act on the Promotion of the Use of Renewable Energy Sources](#)

This law regulates the implementation of the state and municipal policies in the field of RES, establishes binding targets for the share of energy from RES in gross final consumption in the Republic of Slovenia, as well as measures to achieve this target and ways of financing them. It also regulates certificates of origin for energy, self-sufficiency in electricity from RES, the use of energy from RES and surplus heat in the heating and cooling sector and the transport sector, as well as the information and training of installers.

GENERAL LEGISLATION

The important decision-making process for significant investments in multi-apartment buildings is regulated by the [Property Code](#), the [Housing Act](#), and the [Rules on Multi-Apartment Building Management](#). The legal framework, aligned with the [Resolution on the national housing program 2015-2025](#), guides investment decisions, including those related to EE in multi-apartment buildings. For multi-apartment buildings with more than eight individual units and more than two owners, the legislator has prescribed establishing a reserve fund for maintenance purposes. These buildings also require a manager to be appointed. Owners must achieve a 75 % consensus for non-maintenance improvements, not requiring a construction permit. This includes EE measures like building insulation, early-stage boiler room renovation, and installation of air-conditioning or solar panels. Funds from the reserve fund can also take out a loan burdening the building's reserve fund, as stipulated in the Property Code and Housing Act. According to the legislation, obtaining one hundred per cent consent from apartment owners is required to take out a loan burdening the reserve fund.

TAX REGULATIONS

In Slovenia, fiscal instruments are underutilised for incentivising EE and renewable energy measures in buildings. Currently, the fiscal landscape includes two main instruments: reduced Value-Added Tax (VAT) and green and digital transition tax deduction. A reduced VAT rate of 9.5 % instead of the general 22 % rate applies to construction, renovation, and repair activities for buildings within social policy and for restoration and repair services related to private residential buildings meeting specific criteria. The digital transition tax deduction, implemented under the [Corporate Income Tax Act](#), aims to facilitate investments in digital and green transitions. Relevant legislation governing this area includes [Public Finance Act](#), [Fiscal Rule Act](#), [Excise Duty Act](#) and [Rules on the application of tax incentives for investments in the digital and green transition](#).

OTHER LEGISLATION

There is currently no specific national legislation regarding the financing of building renovations. However, in addition to existing financing services legislation, the financing sector supervises renovation financing by EU taxonomy, relevant national regulations, and the Green Bond Principles. These measures aim to guide the financial sector towards increased investment in achieving climate neutrality. The issuance of government green bonds is subject to the [Public Finance Act](#) and is governed by the Slovenian Sustainability Bond Framework 2023. The utilisation of the International Capital Market Association's [Harmonized Framework for Impact Reporting](#) has been acknowledged within the corporate green bonds market. Furthermore, the [Building Act](#) provides the legal foundation for building codes, establishing minimum requirements for building energy performance, technical building systems, and calculation methodologies. Additionally, the [Environmental Protection Act](#) addresses the inspection of boilers.

2.5.2. FINANCING ENERGY EFFICIENCY IN BUILDINGS (PUBLIC AND PRIVATE), SMEs, BUILDINGS OF THE TERTIARY SECTOR

NATIONAL FUNDING

Eco Fund

The Eco Fund finances measures to boost EE, promote RES, and develop Nearly Zero-Energy Buildings (NZEB) with grants from the Energy Efficiency Contribution and the Climate Change Fund (CCF). In 2022, EUR 73,6 million of non-refundable funds were disbursed, specifically EUR 43.5 million based on the Energy Efficiency Act regulation and EUR 30.1 based on the CCF program funds. However, these grants were allocated to various EE and RES measures, not solely to building renovations. Additionally, Eco Fund t supports low-income households through:

- Incentives covering 100 % of eligible costs for energy renovations of multi-apartment buildings and replacing old solid fuel heating equipment.
- The ZERO project provides energy consultations and implements free or low-cost EE measures.
- The ZERO 500 project uses cohesion funds for EE and RES measures in single- or two-dwelling buildings.

CLIMATE CHANGE FUND

The Climate Change Fund (CCF) is overseen by the Ministry of Environment, Climate, and Energy. It is funded through the sale of GHG emission allowances and is utilised to co-finance measures aimed at mitigating and adapting to the impacts of climate change. In the CCF plan for 2023-2026, resources are allocated for the following purposes:

- EE renovation of public buildings, including narrow and broader public sector buildings and buildings of significant importance (EUR 79.5 million).
- EE renovation of residential buildings (EUR 15.5 million).
- Funding for EE or RES measures targeted at alleviating energy poverty (EUR 22.5 million).

DIRECT PRIVATE INVESTMENTS

In Slovenia, various EE services that attract direct private investments are available, including EnPC, Energy Supply Contracting, and Comprehensive EnPC. These services receive support through national policies such as NECP and LTRS 2050. Financing for these services is primarily provided by private investors, accounting for more than 50 % of the investment cost. From 2017 to 2023, investments totalling over EUR 140 million were made based on the EnPC business model.

2.5.3. GREEN LOANS AND BONDS

Green Loans

Slovenian financial institutions, predominantly Eco Fund, SID Bank⁵⁷ and commercial banks are increasingly playing a pivotal role in advancing the green transition, aligning with the EU's carbon neutrality goals.

TABLE 4: LIST OF INSTITUTIONS IN THE BANKING SECTOR IN SLOVENIA⁵⁸

Significant banks	• Nova Ljubljanska banka d.d. • Nova Kreditna banka Maribor d.d. (merged with SKB banka d.d.) • Gorenjska banka d.d. • UniCredit Banka Slovenija d.d. • Banka Intesa Sanpaolo d.d. • N banka d.d. (merged with Nova Ljubljanska banka d.d.) • Addiko Bank d.d.
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⁵⁷ SID – Slovenska izvozna in razvojna banka (is supervised by Banka Slovenije, Insurance Supervision Agency and Ministry of Finance and is specialised in the promotion of exports and development)

⁵⁸ <https://bankaslovenije.blob.core.windows.net/publication-files/annual-report-2022.pdf>

	• Banka Sparkasse d.d.
Less significant banks	• SKB banka d.d. • Deželna banka Slovenije d.d. • Delavska hranilnica d.d. (savings bank) • Hranilnica Lon d.d. (savings bank) • Primorska hranilnica Vipava d.d. (savings bank)
Branches	• BKS Bank AG • RCI Banque Societe Anonyme

While Eco Fund, SID Bank and commercial banks are prioritising support for decarbonisation efforts, they continue to apply standard credit risk parameters. The commercial banks' green loan financing is mainly tailored to the technological and implementation readiness of energy-efficient solutions in sectors like renewable energy and e-mobility. Several Slovenian banks offer 'green loans' for energy-efficient real estate and systems such as solar panels and heat pumps. However, the adoption rate of related financial instruments remains modest, with only a small percentage of new loans directed towards these initiatives as of mid-2024.

TABLE 5: KEY FINANCIAL INSTITUTIONS GREEN LOANS

(1) The Eco Fund has distributed more than 13,000 green and energy efficiency (EE) loans to citizens, municipalities, and legal entities, amounting to approximately EUR 393 million. The Eco Fund has utilised an EIB loan and its financial resources to finance these lending activities. As of June 2024, the EE loan interest rates are fixed at 1.0% for single-house renovations, EURIBOR + 1.3% for multi-apartment buildings, and EURIBOR + 0% for municipalities.
(2) SID Bank, a promotional development and export bank wholly owned by the Republic of Slovenia, provides green loans to enterprises, municipalities, and the public sector: • Fund of Funds (FoF): Established in 2017 in cooperation with the Ministry of Economic Development and Technology to leverage European Cohesion funds. Through the FoF, SID Bank offers loans, guarantees, and equity financing to companies and the public sector via financial intermediaries such as commercial banks, savings banks, and public funds. Long-term loans for energy renovation of public buildings are available to the public sector and ESCOs. Additionally, the public sector can obtain loans for urban development projects. • Indirect Financing through Commercial Banks: SID Bank provides a share of funds to commercial banks, allowing companies to acquire loans for renewable energy sources (RES) projects and efficient energy use. These loans have favourable interest rates compared to regular loans, with maturities between 1 and 15 years, including the possibility of a moratorium. There is no minimum or maximum credit value, and financing can cover up to 85% of eligible project costs, including already started or completed projects. Currently, four banks participate: Addiko Bank, Gorenjska Banka, NKBM, and NBanka. • Financing Regional and Social Development: In cooperation with Intesa Sanpaolo Bank, NLB, and NKBM, SID Bank offers loans from its funds for infrastructure investments and regional development. This includes financing the renovation, construction, or purchase of specialised buildings such as elderly homes, apartments for young people, and non-profit housing.
(3) Commercial banks: Around half of all banks and savings banks in Slovenia offer green loans with slightly lower interest rates, typically reduced by 0.1-0.2 percentage points. One bank provides green loans in cooperation with the Eco Fund. These loans vary in their financing purposes and feature lower interest rates: • Fixed interest rate: 1.0% annually (loans for environmental investments by physical persons) • Variable interest rate: 3M EURIBOR + 1.0% annually or a fixed interest rate of 2.8% (loans for physical persons electric vehicles)

Only one bank offers an interest rate reduction of 0.5 percentage points. Two banks provide fixed interest rates, while the rest offer variable rates linked to the EURIBOR. Additionally, some banks offer lower credit costs and loan insurance. Loan maturities can extend up to 30 years, depending on the type and scale of the project.

Green Bonds

The capital market in Slovenia is small and illiquid and lags behind other EU countries. The market capitalisation of shares about GDP decreased in 2022 to 12.9% compared to 18.2% in 2021, while the EU-27 average of the market capitalisation of shares was 70.7% in 2022). The most common financial instruments on the Slovene capital market are transferrable securities (shares and bonds), money market instruments (treasury bills, certificates of deposits), mutual and umbrella funds, financial derivative instruments (options, futures, swaps) and emission coupons. The market primarily consists of government bonds, while financing of companies through shares and bonds is still negligible compared to other sources of financing⁵⁹. The new Capital Market Development Strategy In Slovenia For The Period 2023-2030⁶⁰ It envisages faster development of the capital market by improving the availability of financing sources for small and medium enterprises (SMEs), promoting digitization, and educating people about financial management.

Currently, Slovenia offers two green bonds: government bonds issued by the Republic of Slovenia and corporate bonds issued by private and public corporations, including commercial and SID banks. Two essential clarifications are necessary. Firstly, the green bond issued by SID bank is wholly owned by the Republic of Slovenia and is not commercial. Secondly, while the government bond is labelled 'sustainable,' it is not explicitly 'green'. Slovenia, which accounted for 2.1% of the national GDP, ranked as the fourth largest issuer of green and sustainability bonds in the general government sector by the end of 2022.

TABLE 6: KEY FINANCIAL INSTITUTIONS GREEN LOANS

GOVERNMENT GREEN BONDS			
Use of bonds	Bonds were issued to support state expenditures with significant environmental and social benefits. In June 2021, the government launched the EUR 1 billion RS88 sustainability bond, maturing in 10 years, followed by an additional EUR 50 million in February 2022. According to the Slovenian sustainability bond report, funding did not include projects classified under the "Green Buildings and Energy Efficiency" category. In January 2023, RS issued another series of sustainable bonds (RS91), totalling EUR 1.25 billion and also maturing in 10 years. According to the Municipal Financing Act⁶¹, municipalities are prohibited from issuing bonds. However, as outlined in the Strategy for the Development of the Capital Market in Slovenia until 2030, this regulation may be subject to change in the future. The government plans to allocate the proceeds within two budget years following the year of issuance. The net proceeds from sustainability bonds are designated for (re)financing expenditures meeting the Eligible Green Project and Eligible Social Project criteria. Among the eligible green categories are green buildings and energy efficiency (EE), which include constructing and acquiring new EE buildings, renovating existing public sector buildings to enhance EE, measures against energy poverty, and implementing EE public lighting.		
Market volume			
Eligible projects			
COMMERCIAL GREEN BONDS	SID Bank	NLB Bank	GEN-I Sonce

⁵⁹ https://www.umar.gov.si/fileadmin/user_upload/razvoj_slovenije/2023/slovenski/POR2023-splet.pdf

⁶⁰ <https://www.gov.si/novice/2023-03-02-vlada-sprejela-strategijo-razvoja-trga-kapitala-v-sloveniji/>

⁶¹ <http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO4615>

Use of bonds Market volume Eligible projects	Green Bond name: SEDABI 12/12/2023 Description: In December 2018, SID bank issued the first green bond for EUR 75 million to finance green projects. This was also the first green bond ever issued in the RS that followed GBP principles issued by the International Capital Market Association.⁶² Use of proceeds: 67.4% of all funds were allocated to green projects in the category of clean transport, 21.4% of funds to projects in the category of RES, 8.8% to sustainable management of resources and waste and 2.3% for EE⁶³. Eligible categories: RES, EE, pollution prevention and control, environmentally sustainable management of living natural resources and land use, clean transport, sustainable management of water and wastewater, products, production technologies and processes that correspond to an ecologically efficient and/or circular economy and green buildings. Energy efficiency: • In residential, public and commercial buildings (with at least a 20% improvement in EE) • In industrial processes, except for industrial	Green Bond name: 4NC3 Description: In June 2023, NLB Bank issued green bonds with due date in June 2027. The bank issued EUR 500 million worth of bonds. The investors placed more than EUR 1.8 billion. Use of proceeds: Currently no information on the use of proceeds is available. Eligible categories: RES, green building, EE, clean transportation, sustainable water and wastewater management, pollution prevention and control. Energy efficiency: • Manufacturing of rechargeable batteries (e.g., lithium-ion batteries),	Green Bond name: GES1 Description: In March 2017, company GEN-I Sonce d.o.o. issued green bond worth EUR 14 million with due date in 2024. The funds have been used to finance RES projects and projects increasing EE. SID bank, who helped develop the financial instrument, invested EUR 9 million while NKBM bank provided EUR 5 million. Use of proceeds: By the end of 2019, the company has invested EUR 8 million in the construction of 1,287 self-sufficient solar power plants, 57 heat pumps and 8 non-self-sufficient solar power plants⁶⁵.
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⁶² https://www.sid.si/sites/www.sid.si/files/documents/mediji/sporocilo_za_javnost_zelena_obveznica_4.12.2018_1.pdf

⁶³ https://www.sid.si/sites/www.sid.si/files/documents/porocilo_o_okoljskih_ucinkih_zelene_obveznice_sid_banke_za_letu_2020.pdf

⁶⁵ <https://gen-i.si/media/gtkhn5aq/gen-i-trajnostno-porocilo-2019.pdf/>

	processes that use fossil fuels • Setting up cogeneration plants (including cogeneration based on biomass from waste products, except production based on fossil fuels) Green buildings: • Residential buildings with energy consumption of no more than 35 kWh/m² per year • Non-residential (public and commercial) buildings, which are among the 15% most energy efficient non-residential buildings in Slovenia⁶⁴	• Battery packs and accumulators for transport, stationary and off-grid energy storage • Construction of facilities that store electricity and return it later in the form of electricity • Installation of electric heat pumps • Installation, maintenance and repair of EE equipment including LED street lamps Green buildings: • Buildings built before 31 December 2020 with EPC label $\geq$ 'A' or belonging to the top 15% of the national building stock based on primary energy demand (PED) • Buildings built after 31 December 2020 with energy performance of at least 10% better than the threshold for Nearly Zero-Energy Buildings (NZEB) based on primary energy demand (PED) in the local market • Buildings that have been refurbished, resulting in a reduction of PED of at least 30% and validated through an Energy Performance Certificate • Buildings that have been refurbished meeting the criteria for major renovations under applicable building regulations	
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⁶⁴ https://www.sid.si/sites/www.sid.si/files/documents/investitorji/green_framework_-_final_slovenski_-30.11.2018.pdf

		New, existing or refurbished buildings with at least one of the following certifications: BREEAM 'Excellent' or above; LEED 'Gold' or above; DGNB 'Gold' and/or above; HQE 'Excellent' and/or above.	
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2.5.4. FINANCIAL SECTOR PERSPECTIVE (PRELIMINARY)

Significant strides are needed to overcome ongoing challenges in financing the green transition within the financial sector. Slovenia is increasingly prioritising sustainable finance, as evidenced by the growth of green bonds, green loans, and eco-friendly investments. However, the financial industry faces the dual challenge of integrating climate risks into traditional economic models and aligning with the EU's stringent sustainability criteria. Efforts are underway to enhance regulatory frameworks and incentivise private sector participation in green projects. Nonetheless, further progress is required to mobilise capital towards a low-carbon economy fully. Continued policy support, innovative financing mechanisms, and robust stakeholder collaboration are essential to ensure a comprehensive and effective green transition.

2.5.5. EXPERIENCE WITH THE APPLICATION OF VARIOUS FINANCIAL SCHEMES AVAILABLE IN THE EU

[Operational Program for the Implementation of the EU Cohesion Policy 2014-2020](#)

The Operational Program for the Implementation of the EU Cohesion Policy 2014-2020 (OP ECP) focused on several key initiatives to enhance EE and reduce carbon emissions. One significant aspect was the deep energy renovation of buildings across municipalities, the wider public sector, and those owned by the central government. This endeavour aimed to modernise infrastructure and promote sustainability in urban and public spaces.

Grant co-financing was provided for deep renovation projects to facilitate these renovations. These projects were primarily implemented through EnPC models and public-private partnerships (PPP), with alternative avenues available through public procurement. This financial support enabled the renovation of 1.1 million square meters of building floor area, totalling EUR 114.4 million in grants by Q2 2024.

[Recovery and Resilience Plan](#)

The Government of the Republic of Slovenia has utilised the Recovery and Resilience Facility (RRF) to develop and fund its Recovery and Resilience Plan (RRP). The initial plan comprised 34 reforms and 52 investments across four pillars: green transition, digital transformation, intelligent sustainable and inclusive growth, and healthcare and social security. The allocated funds totalled EUR 1.78 billion in grants and EUR 705 million in loans. In October 2023, Slovenia's RRP underwent amendments. The revised plan, now incorporating the REPowerEU chapter, is valued at EUR 1.61 billion in grants and EUR 1.07 billion in loans. The total European funds earmarked for implementing the RRP are 2.68 billion euros.

The RRP outlines measures for sustainable building renovation and construction, including:

- Establishing a framework for promoting and financing sustainable renovations, considering seismic and fire safety, radon issues, and removal of hazardous materials.
- Allocate a permanent and dedicated financial source for energy renovation of central government buildings within the national budget.
- Investing in sustainable renovations of publicly-owned buildings, and based on a [list approved by the Government of the Republic of Slovenia](#), aiming for a 30 % reduction in energy consumption compared to pre-renovation levels. The estimated investment cost within the Recovery and Resilience Plan amounts to 86.05 million EUR.

This includes thermal insulation, energy-efficient building elements, heating, cooling, ventilation, lighting, and monitoring systems. Seismic retrofitting, fire safety improvements, and hazardous material replacement will be addressed alongside energy renovation. Cultural heritage preservation requirements will also be considered.

Within the Green Transition pillar, which is one of the four pillars of the Plan, Component C1.K2 focuses on the sustainable renovation of buildings to enhance EE through two measures:

- C1.K2.IG: Investments in increasing EE in the industry (EUR 0.2 million)
- C1.K2.IB: Sustainable renovation of buildings (EUR 66.1 million)

[European Cohesion Policy Program for the period 2021-2027 in Slovenia](#)

The program prioritises building renovation with focuses on:

- Promoting EE and reducing greenhouse gas emissions.
- Planning investments for energy renovation of buildings, including public ones, emphasising sustainability, aesthetics, and inclusivity in line with the New European Bauhaus initiative. Projects will be financed through various financial instruments, including public-private partnerships (PPP), with support from the RRF to streamline documentation and promote additional energy renovation measures.
- Financing for public, private sector, and multi-apartment buildings.
- Incentives to reduce energy poverty and support small and medium Energy Service Companies (ESCOs).
- Access to education services through infrastructure development.
- Promoting comprehensive social, economic, and environmental development, including culture, natural heritage, sustainable tourism, and urban safety.
- Priority for projects supporting economic and social revitalisation of urban areas, including renovating empty or underutilised buildings and cultural heritage sites and creating new public spaces.

To achieve the cohesion policy program-specific goal RSO 2.1, which focuses on promoting EE and reducing GHG emissions, the following measures and allocated funds ([Implementation Plan of the EU Cohesion Policy 2021-2027](#)) are in place:

- Energy renovation of public buildings (EUR 51.5 million)
- Energy renovation of buildings in the private service sector (EUR 15 million)
- Energy renovation of private multi-apartment buildings (EUR 13.2 million)
- Grants and awareness-raising initiatives for low-income households (EUR 15 million)
- Preparation of projects for the energy renovation of public buildings - co-financing of documentation (EUR 8 million)

[European Local Energy Assistance](#)

European Local Energy Assistance (ELENA) provides technical assistance for energy efficiency and renewable energy investments targeting buildings and innovative urban transport for numerous projects in Slovenia. Below is the list of completed ELENA projects related to renovations and implemented via the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD):

- [EOL - Energy retrofit programme of public buildings in Ljubljana](#) (EIB)
- PM4PM - Preparation and Mobilisation of Financing for Sustainable Energy Investments in Primorska Region Municipalities (EIB)
- Energy renovation of public buildings - City of Novo mesto, City of Celje and City of Kranj (EBRD)
- [GovDER - Government Deep Energy Renovation](#) (EIB)

The ongoing ELENA (EIB) project:

- [Sustainable Energy – East Slovenia \(SE-ES\)](#)

ANNEX - INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEME

INVENTORIES BY CONSORTIUM COUNTRY

TABLE 7: INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEMES IN BULGARIA

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation/ success
Structural Funds 2021-2027, Operational Program Environment	Ministry of Environment and Water	Grants	The Programme promotes the coherence of the interventions to be supported with the objectives of the European Green Deal and the transition towards climate neutrality and by in particular the transition towards a circular and resource-efficient economy. Among the priorities with a direct energy-saving effect is the priority "For cleaner air", which supports the transition to green heating of households by replacing inefficient heating appliances with efficient ones.	Private buildings	Low	Medium
Structural Funds 2021-2027, Operational Programme Innovation and Competitiveness	Ministry of Innovation and Growth	Grants	The programme provides support for activities aimed at implementing energy efficiency measures in enterprises based on recommendations from an energy audit (energy efficiency audit): introduction and certification of energy management systems and introduction of energy consumption monitoring and control systems.	SMEs	Low	Medium
Structural Funds 2021-2027, Regional Development Programme	Ministry of Regional Development and Public Works	Grants	The programme provides support for energy efficiency measures in residential and public buildings, including student and school dormitories: awareness-raising campaigns and all types of energy efficiency measures in buildings, including structural (and seismic) strengthening, heating and air-conditioning systems, integrated on-site renewable energy installations, electric vehicle charging equipment, digitisation of buildings, green infrastructure, etc. Improved energy efficiency of the building stock will lead to lower energy consumption, which also contributes to reduced emissions of air pollutants.	All buildings	Medium	Medium
The Invest EU programme			Not available yet			
The Modernisation Fund	Ministry of Energy	Grants	Some of the priority areas where funds will be directed are: Generation and use of electricity produced by RES	Not yet clarified	Medium	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation/ success
			Improving energy efficiency (including in transport, buildings, agriculture and waste), excluding the production of energy from solid fossil fuels			
The Energy Efficiency and Renewable Sources Fund	Ministry of Energy	Loans	The Energy Efficiency and Renewable Sources Fund (EERSF) is an independent legal entity, separate from any governmental agency or institution, and performs its activity in accordance with the EEA, Energy from Renewable Sources Act (ERSA), current legislation framework, and the agreements with the major donors. EERSF is structured as a self-sustainable commercial entity that concentrates its efforts to facilitate energy efficiency (EE) investments, and to promote the development of a working EE market in Bulgaria. The Fund's main environmental objective is to support the identification, development and financing of viable EE projects, resulting in substantial reduction of greenhouse gases (GHGs).	All sectors	Medium	High
National programme for energy efficiency in multi-apartment buildings	Ministry of Regional Development and Public Works	Grants	The main goal of the Programme is to improve the living conditions for citizens living in multi-family residential buildings, improve temperature comfort and improve the quality of the living environment through the implementation of EE measures. The programme provides financial and organisational support to associations of owners in multi-family residential buildings registered in accordance with the procedure laid down in the Condominium Ownership Management Act to improve energy efficiency in the buildings in which they live.	Private buildings	Low	Medium
National Trust EcoFund – Climate Investment Programme	National Trust EcoFund	Grants	The objective of the Investment Climate Program is to encourage initiatives that lead to direct or indirect reduction of the greenhouse gas emissions.	Public buildings	Medium	High
Renewable Energy, Energy Efficiency, Energy Security Programme, financed by the Financial Mechanism of the European Economic Area 2014-2021	Ministry of Energy	Grants	The time horizon of the alternative measure is the period 2019–2020. The Renewable energy, Energy Efficiency and Energy Security Programme is financed by the European Economic Area (EEA) Financial Mechanism 2014–2021. The main goal of the programme is lowering carbon intensity and enhancing the security of supplies. It will be achieved by increasing	Public	Medium	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation/ success
			energy generation from renewable sources, improving energy efficiency in buildings, the industry and municipalities and enhancing expert capacity in the area of renewable energy and energy efficiency.			
National Recovery and Resilience Plan of the Republic of Bulgaria	Ministry of Energy; Ministry of Regional Development and Public Works; Ministry of Innovation and Growth	Grants	The programs under the recovery and resilience plan target all sectors and the funds for energy efficiency and renewable energy are allocated between 3 ministries	All sectors	Medium	Medium

TABLE 8: INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEMES IN CROATIA

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
National Plan for Recovery and Resilience (NPOO)	Ministry of Physical Planning, Construction and State Assets, FZOE	Grants	Multi-Apartment Building Energy Renovation Program (damaged and un-damaged in earthquake), Single family houses Energy Renovation Program, Cultural-heritage Building Energy Renovation Program. Achieve at least 50% savings in annual heat energy for heating (QH,nd) and 30% savings in annual primary energy (Eprim).	All buildings	High	High
National Plan for Recovery and Resilience (NPOO)	Ministry of Physical Planning, Construction and State Assets	Grants	Pilot project of green infrastructure development and/or circular management of space and buildings	Public	High	Low
Eenergy	Croatian Agency for SMEs, Innovations and Investments (Hamag-Bicro)	Grants	Supported by the Enterprise Europe Network (EEN), offers €9 million from the European Union to promote innovation and sustainability among SMEs in Europe. Entrepreneurs can receive up to €10,000 in grants, with at least 900 grants available. The grants aim for a 5% reduction in energy consumption through investments in facilities and equipment, energy-saving consulting, or employee training.	SME	Low	High
ESIF: Operational Programme Competitiveness and Cohesion 2014-2020	Croatian Bank for Reconstruction and Development (HBOR); cooperation with the Environmental Protection and Energy Efficiency Fund and the Ministry of Construction and Physical Planning	Financial instrument: ESIF Loans ESIF Guarantee Subsidy interest rate	ESIF credits for energy efficiency in public buildings under Priority Axis 4 of OPKK offer lower interest rate than bank loans, favorable guarantees for easier bank loans, and equity investment opportunities. They provide streamlined access with minimal administrative burden, full disbursement of funds, and VAT eligibility. ESIF financial instruments aim to achieve at least 50% energy savings in heating/cooling. ELENA grants support project planning. Interest rate subsidies vary by regional development (0.1-0.5%).	Public	High	High
ESIF: Operational Programme Competitiveness and Cohesion 2014-2020	Croatian Agency for SMEs, Innovations and Investments (Hamag-Bicro) Croatian Bank for Reconstruction and Development (HBOR)	Financial instruments: Limited Portfolio Guarantee, Individual guarantee; without interest rate subsidy; with interest rate subsidy; Micro loans and Small loans; COVID-19 loan.	ESIF Loans for growth and development from Priority axis 3 "Business competitiveness" OPKK 2014-2021. These are larger investment loans with low interest rates and no regular fees that are charged when the loan is approved and used.	Commercial, SME, Industry	Low	Low
ELENA - European Local Energy Assistance (ELENA)	European Investment Bank	Grants	Program to support energy efficiency improvements in Croatian businesses and municipalities. Provides technical assistance, project implementation, helps owners of E and F energy class commercial buildings receive support from HBOR to develop applications for EU and other grants. This	Public, SME, Industry	High	High

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			initiative aims to improve energy efficiency and install renewable energy sources within buildings. Key targets include: energy efficiency, renewable energy, CO2 reductions, job creation.			
REPowerEU	Ministry of Physical Planning, Construction and State Assets	Grants	Pilot project of green infrastructure development and/or circular management of space and buildings	Public	High	Low
National Plan for Recovery and Resilience (NPOO)	Croatian Agency for SMEs, Innovations and Investments (Hamag-Bicro) Croatian Bank for Reconstruction and Development (HBOR)	Financial instrument: Investment Loans	Investment loan within the Financial Instrument must adhere to the "Do No Significant Harm" (DNSH) principle, ensuring compliance with all six environmental goals defined by the EU taxonomy: Mitigating climate change, Adapting to climate change, Sustainable use and protection of water and marine resources, Transitioning to a circular economy, Pollution prevention and control, Protection and restoration of biodiversity and ecosystems	Commercial, SME, Industry	High	High
National Plan for Recovery and Resilience (NPOO)	Croatian Agency for SMEs, Innovations and Investments (Hamag-Bicro) Croatian Bank for Reconstruction and Development (HBOR)	Financial instrument: Subsidy interest rate	Incentives (Subsidy) of interest rate within the Financial Instrument must adhere to the "Do No Significant Harm" (DNSH) principle, ensuring compliance with all six environmental goals defined by the EU taxonomy: Mitigating climate change, Adapting to climate change, Sustainable use and protection of water and marine resources, Transitioning to a circular economy, Pollution prevention and control, Protection and restoration of biodiversity and ecosystems	Commercial, SME, Industry	High	High
National Plan for Recovery and Resilience (NPOO)	Croatian Bank for Reconstruction and Development (HBOR) and commercial banks	Financial instrument: Guarantee	Loan Guarantee within the Financial Instrument must adhere to the "Do No Significant Harm" (DNSH) principle, ensuring compliance with all six environmental goals defined by the EU taxonomy: Mitigating climate change, Adapting to climate change, Sustainable use and protection of water and marine resources, Transitioning to a circular economy, Pollution prevention and control, Protection and restoration of biodiversity and ecosystems	Commercial, SME, Large caps	High	High
ESCO model: Operational Programme Competitiveness and Cohesion 2014-2020	Croatian Government Real Estate Agency (APN)	ESCO	Public Building Energy Renovation and ESCO Program. Achieve at least 50% savings in annual heat energy for heating (QH,nd) and 30% savings in annual primary energy (Eprim). promotes CO2 reduction and decarbonization, encouraging the ESCO model and SME access to the energy services market.	Public	High	High

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
Modernisation fund - EU Emissions Trading System (EU ETS)	Environmental Protection and Energy Efficiency Fund (FZOEU), managed by the Ministry of Economy and Sustainable Development (MINGOR)	ETS	Scheme to support investments in energy efficiency improvement" in 2022, representing a 50:50 financing ratio toward the total investment costs of €80 million. Expected added value of each investment financed from the Modernization fund: Energy savings (MWh/year), cumulative MWh and tCO2 saved by the end of the investment lifetime, GHG saved (tCO2/year), Additional RES capacity installed (kW), Leverage of funds (%)	All buildings	High	Low
EFRD - Operational Programme Competitiveness and Cohesion 2021-2027	Ministry of Economy and Sustainable Development (MINGOR), Ministry of Physical Planning, Construction and State Assets (MPGI), Ministry of Regional Development and Funds of the European Union (MRRFEU)	Grants	Public buildings with improved energy efficiency. Comprehensive renovation of public sector building damaged in earthquake. Energy efficiency, comprehensive and circular renovation of public buildings sector	Public	Call in progress	Call in progress
EFRD - Operational Programme Competitiveness and Cohesion 2021-2027	Ministry of Economy and Sustainable Development (MINGOR), Ministry of Physical Planning, Construction and State Assets (MPGI), Ministry of Regional Development and Funds of the European Union (MRRFEU)	Financial instrument	Residential buildings with improved energy properties. Energy and comprehensive renovation apartment buildings (ESIF loans)	Private buildings, Commercial buildings, SME, Industry	Call in progress	Call in progress
Social Climate Fund (SCF)	Ministry of Physical Planning, Construction and State Assets (MPGI), Central State Office for Reconstruction and Housing (SDUOSZ)	ETS Grants	To finance these measures and investments in support of the most vulnerable groups, the SCF will pool revenues from the auctioning of allowances from the ETS2 as well as 50 million allowances from the existing EU ETS. Together with a mandatory 25% contribution of the Member States to their Social Climate Plans, the SCF should mobilise at least €86.7 billion over the 2026-2032 period.	Private buildings, energy poverty	Call in progress	Call in progress

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
CROGIP2	Croatian Bank for Reconstruction and Development (HBOR) and European Investment Fund (EIF)	Equity, Quasi-equity	The European Investment Fund (EIF) and the Croatian Bank for Reconstruction and Development (HBOR) are investing €52 million in fast-growing Croatian companies through the Croatian Growth Investment Programme (CROGIP II). HBOR's funds secured via the EU's Recovery and Resilience Mechanism. The funds target SMEs and medium-sized companies (up to 3,000 employees) at late-stage venture, growth capital, replacement capital, or buyout stages. The program, focusing on sustainability, green transformation, and innovation, requires that at least 25% of investments align with Climate Action and Environmental Sustainability criteria.	SME	High	In progress
ERDF: Urban Development Fund	Croatian Bank for Reconstruction and Development (HBOR)	Financial instrument: Principal write-off Subsidy interest rate	HBOR Urban Development Fund, initiated by the Ministry of Regional Development and EU Funds of Croatia, finances long-term investments in public sector infrastructure through a mix of European Regional Development Fund (ERDF) and HBOR funds. Eligible borrowers include local or regional government units and entities they own. The fund supports projects in environmental protection, energy efficiency, and multi-purpose infrastructure, with loans available until December 31, 2029, and potential for partial loan write-offs based on predefined criteria. Loans range from EUR 100,000 to EUR 10,000,000, with favorable interest rates and no processing or commitment fees.	Public commercial component with	Call in progress	Call in progress

TABLE 9: INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEMES IN GREECE

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
National Recovery and Resilience Plan	Recovery and Resilience Facility Coordination Agency	Financial instrument	The National Recovery and Resilience Plan 'Greece 2.0' was adopted on July 13, 2021, by the Economic and Financial Affairs Council of the European Union (Ecofin), amounting €30.5 billion, while on December 8, 2023, its revision was approved, concerning mainly new investments and reforms under REPowerEU as well as expanding the existing loan program. The revised Plan amounts to €35.95 billion. It includes 103 investments and 76 reforms, structured around four pillars, including the new REPowerEU chapter: Green Transition, Digital Transformation, Employment-Skills-Social Cohesion, Private Investments and Transformation of the Economy. Its resources are channeled into grants and loans and is expected to mobilize over €60 billion of total investment in the country by the end of 2026, when all projects should have been implemented.	Home owners/SME	High	High
Deposit and Loans Fund	Ministry of Finance	Debt (with maturity)	The Consignment Deposits and Loans Fund (CDLF) is a non-profit organization which operates as a Legal Entity of Public Law. It belongs to the Ministry of Finance. Its objective is the registry of consignments and the social and regional development by funding projects of Public and Social Interest. For this purpose the CDLF mainly grants loans to municipalities and prefectures, participates in development bodies and co-funds projects with the EIB.	Public	High	High
Just transition programme (NRSF 2021-2027)	Ministry of Finance	Investments grants, Technical assistance	The "Just Development Transition" Program 2021-2027 (PDAM) with a total budget of €1.63 billion is co-financed by the Just Transition Fund and is implemented in the context of the cohesion policy. It serves the distinct specific objective on the just transition, providing support to those regions and people affected by the social, employment, economic and environmental impacts of the transition, towards the Union's 2030 energy and climate goals and towards a climate neutral Union economy by 2050.	Enterprises	High	Medium
"Environment and Climate Change" (NRSF 2021-2027)	Ministry of finance	Financial instrument	The "Environment and Climate Change" Program was approved by the European Commission on 26/08/2022 and is the main Sectoral Program of the NSRF for the implementation of the country's development strategy in the main thematic areas of Energy, Adaptation to Climate Change, Urban environment. The Program has a total budget of 3.6 billion euros in terms of public expenditure and is co-financed by the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). Involved stakeholders are: Ministry of environment and energy and its supervised entities, e.g. OFYPEKA, other Ministries with relevant competence in the above policy matters, OTAs of the first and second degree and their enterprises such as Municipal Water Supply and Sewerage Companies (MUSCs), Solid Waste Management Agencies, Decentralized Administrations, Organizations with the object of protecting the Natural Environment,	National authorities and Agencies NGO's Citizens Education sector	High	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			Foundations of Higher Education, Research Organizations, Individuals and Households.			
NRSF-Regional Programs	Ministry of finance	Investments grants	NSRF includes 13 Regional Programs. Each of the Greek Regions is the subject of a regional program that includes regional scale projects and actions and utilizes local advantages	Public	High	High
European Local ENergy Assistance	EIB EC	Investments grants	Grants for studies, energy audits, business plans, project management etc for private and public entities to develop energy efficiency and renewable energy investments targeting buildings and innovative urban transport.	Building owners	High	High
LIFE programme	CINEA	Investments grants	The LIFE is the European Union's funding instrument for the environment and climate action.	public, private sector, SMEs, organisations	High	High
European Energy Efficiency Fund	EIB	Investments grants	EEEF targets investments (Direct or Investments into Financial Institutions) having as final beneficiaries municipal, local and regional authorities as well as public and private entities acting on behalf of those authorities such as utilities, public transportation providers, social housing associations, energy service companies etc	Banks. Public entity, private entity	High	Medium
Joint Assistance to Support Projects in European Regions	EIB	Investments grants	Joint Assistance to Support Projects in European Regions (JASPERS) helps cities and regions absorb European funds through top-quality projects. JASPERS offers free of charge assistance for local authorities and promoters for any stage of the project cycle from the early stages of project conception through to the final application for EU funding.	Public authority	High	Medium
European Crowdfunding Network	ECN	Financial instrument	Promote crowdfunding as a viable offering of job creation, social innovation and boost to entrepreneurship to the European public, policy makers and stakeholders. Providing resources, professional support and a forum for collaborative action regarding crowdfunding	Public authority	Medium	Medium
National Energy Efficiency Fundnal Energy Efficiency Fund	Ministry of Energy and Environment	Investments grants	The Fund may serve as both lending fund and guarantee fund. The Fund's main activity will be to refinance loans from available funds from which loans are granted and in the context of which loan repayments are made and re-leased.	Public authority	Medium	Call in progress
Piraeus Business ENergy Upgrade loan for SMEs	Piraeus Bank	Loan	Medium - Term loan for Small and Medium-sized Enterprises which need financing for their energy upgrade. It combines financing and insurance solutions.	SME	High	High
HDB Green Co-Financing Loans	Piraeus Bank	Financial instrument Investments grants	Piraeus Bank, in collaboration with the Hellenic Development Bank – HDB offers to SMEs financing on preferential terms, combining a two-year subsidy of	SME	High	High

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			interest with partly interest-free financing, aiming at financing business investment plans that will involve green investments.			
Green Fixed-Rate Mortgage Loan	Piraeus Bank	Loan	The Green Mortgage Loan is offered with an interest rate discount for the entire tenor of the loan, provided that the residence falls within one of the following energy efficiency categories: A+, A, B+, as certified by the designated Bank's engineer. Rewarding the client for a green home, the Green Mortgage Fixed Rate Loan comes with zero loan application expenses.	Home owner	Medium	Medium
Green Euribor Mortgage Loan for Individuals	Piraeus Bank	Loan	Green mortgage loan for the purchase, construction, completion or radical renovation of a low energy efficiency home. The interest rate is variable based on the Euribor 1M plus a fixed spread for the whole duration of the loan. The above spread is personalized and thus unique for each customer.	Home owner	Medium	Medium
Green Home Improvement Loan for home with Collateral for Green Upgrades	Piraeus Bank	Loan	Mortgage/home Improvement loan for interventions to upgrade the energy performance of the house and save water. The interest rate varies with the Euribor 1M rate plus a fixed spread (3.95%) for the entire term of the loan. This Loan comes with a low interest rate (approx.. 6.7%) and with zero loan approval fees.	Home owner	Medium	Medium
Green Co-financed Loans within the Business Growth Fund of the HDB with Collateral	Eurobank	Financial instrument Investments grants	Eurobank offers co-financed loans for the implementation of investment plans for the green transition businesses. The Hellenic Development Bank- HDB finances 40% of the loan's interest and offers an additional 3% interest rate subsidy on the remaining 60% of the loan for the first 2 years. To obtain a loan, a collateral based on Eurobank's current credit policy is required.	SME	High	Medium
Personal Green Fast Loan	Eurobank	Loan	The Green Fast Loan is a personal loan of up to 5.000 euros issued for buying green home appliances, replace old appliances that consume a lot of energy, or save energy on commute by buying an electric bike or scooter.	Home owner	Medium	Low
Loan for home energy upgrade with Mortgage or Collateral	Eurobank	Loan	This loan offers a fixed (starting from 3.00% for 3 years to 4.30% for 30 years) or variable interest rate linked to Euribor 3M plus a spread of 1.65%. There is also the option for a discounted interest rate if the client meets certain credit requirements.	Home owner	High	Low
Green Home Loan for energy saving with or without Collateral	Eurobank	Loan	Eurobank offers this loan for energy upgrade works, for a duration of 2-30 years.	Home owner	High	Low
Green Investments II program in cooperation with the European Investment Bank	National Bank of Greece	Financial instrument	The objective of the program is to strengthen the access of SMEs and MidCaps to bank financing on particularly favorable terms for the implementation of investment projects that contribute to the delivery of green tagging action objectives and, in particular, generation of energy from renewable energy	SME	High	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			sources (RES), such as solar energy, biomass, biogas, hydroelectric energy, wind energy or other RES.			
Alpha Green Solutions Energy Saving Home	ALPHA Bank	Loan	The Alpha Green Solutions – Consumer Loan offers financing for home energy upgrade measures for the building envelope (thermal insulation, replacement of window frames) and systems (installation of solar panels, heat pump or natural gas boiler). The amount offered by the bank ranges from €1.500 to €30.000 and the repayment period may range from 6 to 96 months. The interest rate remains fixed at 8.75% throughout the loan term (plus the Law 128/75, currently at 0.60%).	Home owner	High	Low
Green Co-Financing Loans	ABBank	Loan	ABBank has been chosen to participate in the new co-financing scheme of Hellenic Development Bank. The 3 flexible financing products on offer -namely “Liquidity Co-Financing Loans”, “Green Co-Financing Loans” and “Digitalization Co-Financing Loans”- enable Greek SMEs to secure favorable financing terms that include, among others, an interest subsidy of up to 3% for the 1st two years and interest-free financing for 40% of the total amount of the Loan.	SME	High	Medium
ATTICA ECO SOLUTIONS – ENERGY UPGRADE OF YOUR HOME	Attica Bank	Loan	The interest rate is fixed for the entire duration of the loan. 7,90%, plus tax (currently 60%) A reduction of 0,20 % in the nominal interest rate is granted after the presentation of the energy certificate after the measures implementation	Home owner	High	Low
Exoikonomo 2021	Epirusbank	Financial instrument Investments grants	The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. In the context of the long-term and practical support of initiatives to improve the environment, they participate in the "Exoikonomo 2021" program. Bank offers all the support and guidance customers need to upgrade their home energy efficiency.	Home owner	High	High
SMEs loans co-financed	Epirusbank	Financial instrument Investments grants	Epirusbank , in collaboration with the Hellenic Development Bank – HDB offers to SMEs loans are co-financed by a Fund managed by the Hellenic Development Bank (HDB), with resources financed by the Greek State and the European Investment Bank and are ideal for Micro, Small and Medium -sized Enterprises that wish to invest on their green upgrade with preferential terms.	SME	High	Medium
Home Energy Savings Program II	Cooperative Bank of Karditsa	Financial instrument Investments grants	The bank participates actively in the “Home Energy Savings Program II”.	Home owner	High	High
Mortgage and national programmes	Bank of Thessaly	Financial instrument Investments grants	The bank cooperates with the Hellenic Development Bank for implement the national programmes for energy efficiency in residential and tertiary sector. On the other hand It finances the purchase of a home, the construction of a home and the reconstruction and renovation of a home, with a financing rate of	Home owner	High	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			up to 80%. It is repaid with monthly interest-free installments and is secured by a pre-notification on the property			
Financing of innovative and new investments	OPTIMA BANK	Loan	In the context of the approval of the National Recovery and Resilience Plan "Greece 2.0" with the 10152/21 Executive Decision of the European Council, at Optima bank they participate actively and effectively in the new era for Greek entrepreneurship and society, through the financing of innovative and new investments, with one aim of the transition to a green economy.	SME	High	Low
Development of businesses with the new co-financed programs of Hellenic Development Bank	ProCredit Bank	Financial instrument Investments grants	ProCredit Bank supports the development of businesses with the new co-financed programs of Hellenic Development Bank that offers 40% interest-free financing and 3% interest rate subsidy for the first two years.	SME	High	Medium
Home Energy Savings Program 3	PANCRETA BANK	Financial instrument Investments grants	The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. Bank offers all the support and guidance customers need to upgrade their home energy efficiency.	Home owner	High	High
Business Energy Savings Program	PANCRETA BANK	Financial instrument Investments grants	The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. Bank offers all the support and guidance customers need to upgrade their business	SME	High	High
SMES green upgrade	PANCRETA BANK	Financial instrument Investments grants	Pancreta Bank , in collaboration with the Hellenic Development Bank – HDB offers to SMEs loans are co-financed by a Fund managed by the Hellenic Development Bank (HDB), with resources financed by the Greek State and the European Investment Bank and are ideal for Micro, Small and Medium -sized Enterprises that wish to invest on their green upgrade with preferential terms.	SME	High	Medium
Home Energy Savings Program	Cooperative Bank of Chania	Financial instrument Investments grants	The bank participates in the program that is implemented in the framework of the National Recovery and Resilience Plan Greece 2.0 with funding from the European Union - NextGenerationEU. Bank offers all the support and guidance customers need to upgrade their home energy efficiency	Home owner	High	High
Green Co-Financing Loans	9. Hellenic Development Bank (HDB)	Financial instrument/Investments grants	The Hellenic Development Bank (HDB) is a valuable element in the integration of Micro, Small and Medium size enterprises (MSMEs) financing cycle, through the collateralization of the fraction of business risk not accepted by the banking system, thus amplifying the scope of viable entrepreneurial initiatives undertaken by MSMEs. Green Co-Financing Loans The Green Co-Financing Loans Fund was established to provide favorable terms regarding investment loans to small and medium-sized enterprises (SMEs),		High	High

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
			offering 40% of the capital interest rate-free and a two-year partial interest subsidy upon the Financial Intermediary's interest rate for the remaining 60% of the capital, for the implementation of Green Transition investment projects. Investment projects regarding Green Mobility, Energy Efficiency/Energy Upgrades, and Energy Production through Renewable Sources are supported. The European Investment Bank (EIB), collaborates alongside with the Hellenic Development Bank (HDB), the Greek State and the Financial Intermediaries, in order to finance investment programs that contribute to the goals of the European Union. Learn more about the European Investments Bank (EIB) role in supporting SME's.			

TABLE 10: INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEMES IN ROMANIA

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
The OP for Large Infrastructure (POIM) 2014 -2020 PA 6 "Promoting clean energy and energy efficiency aiming at supporting a low carbon economy"	Ministry of European Funds	Investments grants	For implementing: systems for monitoring energy consumption at industrial consumers smart distribution systems in a homogeneous area of household electricity consumers	All sectors	High	High
The OP for Large Infrastructure (POIM) 2014 -2020: PA 7 "Increasing energy efficiency of the centralized heating system in selected towns"	Ministry of European Funds	Investments grants	Modernisation and extension of the centralised heating systems. Mainly in Bucharest and other 7 selected cities (Botoşani, Oradea, Iaşi, Râmnicu Vâlcea, Bacău, Timişoara, Focşani).	Infrastructure	High	High
The Regional Operational Programme (ROP) 2014-2020 - PA 3 - Supporting the transition to a low-carbon economy	Minister of Development, Public Works and Administration	Investments grants	Increasing the energy efficiency of public buildings owned and occupied by both local and central authorities, residential buildings, public lighting systems, as well as investments to reduce CO2 emissions in urban areas, based on sustainable urban mobility plans.	All buildings	High	High
ELENA	EIB EC	Grants for Project Development Services	Only one ELENA project in Romania: Project Development Services to support District 6 Bucharest municipality for deep energy retrofit of 11 existing buildings	All buildings Urban transport	High	Low
Swiss-Romanian Cooperation Programme	Swiss Government	Investments grants	The programme includes EE projects: buildings, public lighting.	Buildings Infrastructure	Low	High
EEA and Norwegian Financial Mechanisms –The Energy Programme for Romania	Innovation Norway	Investments grants	For any legal institution/organisation/company. EE projects (as building renovation, renewables, energies, buildings decarbonisation, intelligent buildings, energy audits, green innovation in industry) are scope of the programme.	All sectors	Low	High
“Central Heating 2019-2027 heat and comfort” Programme	Minister of Development, Public Works and Administration, Local authorities, Environmental Fund Adm.	Investments grants	Provides investments to local public administration for the modernisation, rehabilitation, refurbishment and expansion or establishment of central heating systems for localities.	Infrastructure	High	High
The national programme for increasing the energy performance of residential buildings	Minister of Development, Public Works and Administration	Investments grants	For thermal insulation of multi-store blocks built between 1950 and 1990.	Buildings private	High	High

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
Financing Programme for Small and Medium-sized Enterprises and the HORECA field	Ministry of Economy	Investments grants	For PV systems and at least one recharging station of at least 22 kW for electric cars.	SMEs	Medium	High
ELECTRIC UP programme	Ministry of Economy	Investments grants	Installation of photovoltaic panels and charging stations for electric cars.	SMEs	Low	High
Energy efficient households	AFM, Administration of the Environmental Fund	Investments grants	For homeowners as a premium to make investments for the energy efficiency of their home.	Buildings private	Moderate	High
Programme on increasing energy efficiency and intelligent energy management in public buildings for schools	Environmental Fund Administration	Investments grants	Increasing EE and intelligent energy management in public buildings related to schools.	Buildings public	Medium	High
National programme to replace used electrical and electronic equipment with more energy-efficient ones	Environmental Fund Administration	Financial incentives	Voucher for the replacement of old electrical and electronic equipment for household, with new, more energy efficient ones.	Buildings private	Low	High
Green Economy Financing Facility	European Bank for Reconstruction and Development	Loan guarantee	GEFF, through local FIs, finances household or business customers for: Household credits for high energy performance equipment and materials; Home mortgages to buy low-energy new houses/apartments; Renovation financing to make older homes more energy-efficient; Business loans to help companies who supply EE or renewables products or services to households.	Buildings private	Moderate	High
Thermal rehabilitation programme for residential buildings financed by bank loans with government guarantee	Minister of Development, Public Works and Administration Commercial banks	Subsidised loans	Provides building owners access to loans for thermal rehabilitation and replacement/repair of the heating system.	Buildings private	High	High
Romanian Fund for Energy Efficiency		Loan guarantee	Commercially finances the industrial sector and other energy consumers in order to facilitate the use of EE technologies. FREE manages, the resources received by Romania from the Global Environment Facility through the International Bank for Reconstruction and Development (IBRD).	All sectors	High	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation / success
Green Mortgage	Commercial banks (Raiffeisen Bank, Alpha Bank)	Reduced loans for green buildings	The Green Mortgage provides discounted mortgage pricing available to certified Green Homes	Buildings private	Moderate	Low

TABLE 11: INVENTORY AND EVALUATION OF OUTLINED FINANCIAL SCHEMES IN SLOVENIA

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation/ success
Eco Fund	Eco Fund	Soft loans	Eco Fund provides soft (environmental, EE, RES) loans with favourable interest rates which are provided from own funds, interests income and additional loans from the EIB.	Industry, public sector, private service sector and households	Medium	High
Energy Efficiency Contribution – alternative policy measures	Eco Fund	Grants	Eco Fund finances investments in measures contributing to increased EE, use of RES and construction of nearly zero-energy buildings. The main instrument for increasing EE and the use of RES in households are financial incentives which are granted to investments in single- and two-dwelling buildings and in multi-apartment buildings. The set of measures funded by grants differ in regard to the invitation to tender and in regard to the amount of the received grant. The grants are financed from the Energy Efficiency Contribution, paid per energy use in order to increase energy efficiency, and from the CCF.	Industry, public sector, private service sector and households	High	High
Climate Change Fund	Ministry of Environment, Climate and Energy, tendered by the Eco Fund	Grants and financial instruments	The CCF is managed by the Ministry of Environment, Climate, and Energy in Slovenia. CCF co-finance measures for climate change mitigation and adaptation. The program's allocations are updated periodically. According to the CCF program, financial incentives include EE, RES and self-sufficiency measures, near zero-energy buildings, energy renovation of public and residential buildings, investments in higher EE in buildings, replacement of old heating devices with woody biomass boilers or heat pumps, measures for reducing energy poverty, incentives for low-income households.	All sectors	High	High
European Structural and Investment Funds - Cohesion Fund	Ministry of Environment, Climate and Energy, SID Bank	Grants and financial instruments	The scheme is implemented within the framework of the European Cohesion Policy Program for the period 2021-2027 in Slovenia. It prioritizes deep building renovations with a focus on promoting EE and reducing GHG emissions. Key aspects include planning sustainable and inclusive energy renovations for buildings. Financing involves various instruments, such as PPP and EnPC. The program also targets reducing energy poverty and supporting SME ESCOs. Through the FoF, SID Bank provides loans, guarantees, and equity financing to companies and the public sector via intermediaries. Long-term loans for energy renovation of public buildings and urban development projects are available to the public sector and ESCOs.	Public sector, economic sector	High	Medium
Recovery and Resilience Facility	Ministry of Finance, Recovery and Resilience Office of the Republic of Slovenia	Grants, loans	According to the operational program and financial plan for the use of the recovery instrument for the period 2021-2026, the largest share of the funds, 42.45%, is allocated to the Green Transition development field. This allocation contributes to achieving climate objectives. Additionally, part of the funds is designated for sectoral measures, including research and training for the green transition. The revised financial plan, which includes the REPowerEU chapter, is worth EUR 1.61 billion in grants and EUR 1.07 billion in loans. Within the Green Transition pillar, EE is addressed with two	Economic sector, transport sector and buildings sector	Medium	Medium

Financial scheme	Main providers of the scheme	Type of Scheme	Key Information on the Scheme	Beneficiary sector	Relevance/ Influence on EE goals	Implementation/ success
			measures: investments in increasing EE in industry (EUR 0.2 million) and the sustainable renovation of buildings (EUR 66.1 million).			
ELENA Technical Assistance	EU Commission, EIB, and EBRD via Municipalities and Ministry of Environment, Climate and Energy	Grant	Local communities and the central government have successfully undertaken all the necessary organization for the implementation of deep energy renovations, primarily due to the ELENA technical assistance. Local Energy Agencies (LEAs) also play an important role in the preparation and implementation of energy renovation projects in municipally owned buildings.	Public Sector	High	High
Government and commercial green bonds	Government of the Republic of Slovenia, SID Bank, Nova Ljubljanska Banka, GEN-I Sonce	Loans, equity	Amounts equal to the bond's net proceeds are exclusively used to (re)finance eligible expenditures falling within the eligible green project categories.	All sectors	Low	Medium