



INCENTIVES FOR ENERGY EFFICIENCY

CEE/SEE Region

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Executive summary

As energy efficiency gains importance, public and private players seek new ways of bridging the funding gap generated by the significant need to refurbish and modernize the existing building stock.

Central and Eastern Europe is characterized by a large percentage of outdated buildings, either built in or before the Communist period or as a result of industrial technology which paid little attention to preserving energy. Around 4 billion square meters of buildings in the CEE are in need of refurbishment, generating a large market for various service providers.

As Governments struggle to find sufficient funding to cover the existing need, especially in the light of the obligation to refurbish public buildings at a rate of 3% annually imposed by European legislation, the EU-structural and investment funds remain the largest source of public funding dedicated to energy efficiency. During the 2014 – 2020 period, no less than 8.7 billion EUR have been, and are being, made available to various types of retrofitting projects developed either by public players or by private entities. There are around 50 operational programs which are open to projects concerned with energy efficiency and renewable energy.

Complementing the European funds, some Governments have developed national programs offering grants, preferential rate loans or tax incentives for projects concerning energy efficiency. The Czech Republic and Austria stand out as experienced countries in developing such programs. At the other end, Romania and Slovakia are still taking their first steps in developing state-funded energy efficiency programs.

International Financial Institutions, such as the European Investment Bank (EIB) or the European Bank for Reconstruction and Development

(EBRD) offer their assistance in introducing financial instruments dedicated to energy efficiency, as a means of leveraging existing funding and increasing the pace of achieving each country's individual energy efficiency targets. Various credit lines are extended to local banks or made directly available to potential investors.

Simply investing in refurbishment projects is, however, not sufficient for achieving the set targets. The types of projects vary greatly, making it difficult to assess success and results. EU level programs offer support, either through funding for research and innovation or technical assistance, to standardization attempts, risk-mitigation initiatives, market uptake of new technologies or mainstreaming energy efficiency.

The funding landscape is further complemented by commercial banking finance. In Central and Eastern Europe, as in the rest of Europe, banks have not yet fully embraced energy efficiency projects as they present new risks and are in need of a different methodology for valuation and risk assessment than traditional investments. With EU funding, steps have been taken to standardize energy efficiency projects, to develop underwriting tools and methodologies and to attract commercial banking as full partners in the refurbishment of the building stock.

Last but not least, energy efficiency projects can be developed in close partnerships between clients, either public or private, and energy services providers, through Energy Performance Contracting and ESCOs. Most countries in the CEE are taking timid steps towards developing the EPC market, with a few countries standing out (such as the Czech Republic).

Context

The increasing importance of energy efficiency measures is reflected in a number of EU-directives introduced in the past ten years, obliging member countries to comply with a minimum standard in their procurement and investments.

The EU-Energy Efficiency Directive (EED, Directive 2012/27/EU) covers the renovation of existing public buildings. The Directive's Article 5 underlines the importance of leading by example and thus introduces the obligation to annually renovate 3% of the buildings owned and occupied by central governments, starting with January 2014. In addition, energy efficiency aspects must be included in public procurement procedures, making sure public authorities acquire energy efficient buildings, products and services. In addition, governments are given the leading role in refurbishing the existing building stock.

Complementing the requirements set out under the EED regarding buildings owned and occupied by public authorities, **the Energy Performance of Building Directive (EPBD, Directive 2010/31/EU)** obliges the Member State to make sure that "after 31 December 2018, new buildings occupied and owned by public authorities, are nearly zero-energy buildings".

Under the **Energy Labelling Directive (Directive 2010/30/EU)**, public authorities must strive to "procure only such products which comply with the criteria of having the highest performance levels and belonging to the highest energy efficiency class". Member States can introduce minimum energy efficiency criteria for procurement of energy-related products.

The **Ecodesign Directive (Directive 2009/125/EC)** introduced European standards for products' energy efficiency levels, making it easier for producers to penetrate the various national markets. The directive applies to both energy-consuming products and to products with an impact on the overall energy consumption, such as doors, windows and insulation materials. The directive thus affects public authorities, as key players in refurbishing Europe's existing building stock, offering a set of useful technical parameters to guide energy efficiency related public procurement.

The public sector's importance in streamlining energy efficiency and renewable energy is also included in the **Renewable Energy Directive (Directive 2009/28/EC)**, which allows Member States to set specific standards for including renewable energy sources in buildings occupied partially or completely by public authorities.



European Structural and Investment Funds

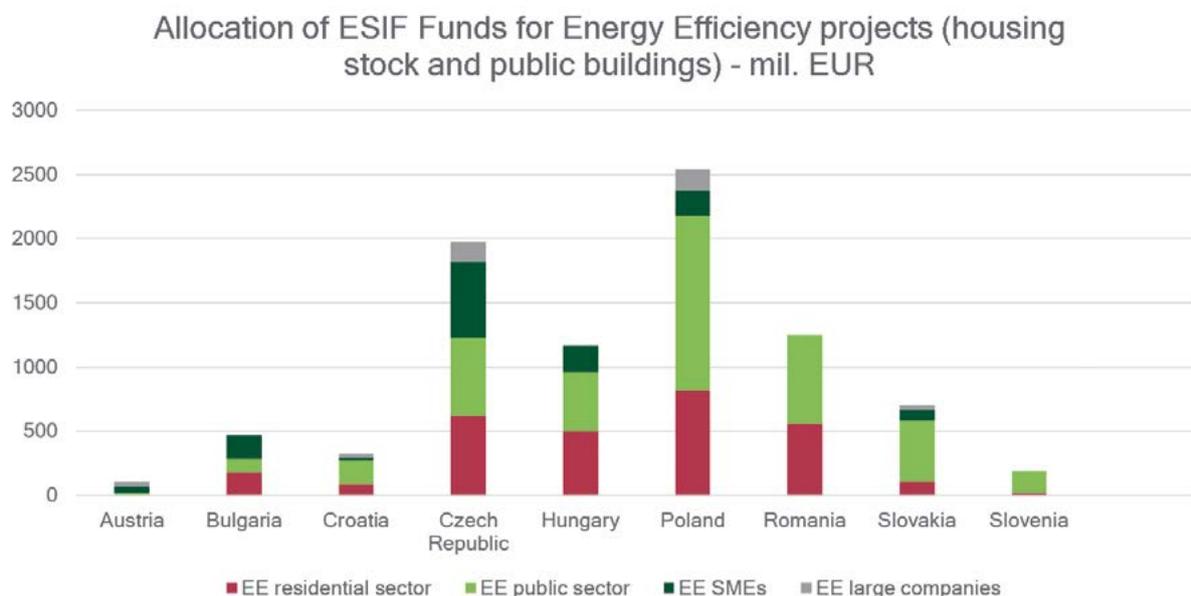
The European Structural and Investment Funds are the largest source of public funding dedicated to energy efficiency. In the CEE Region, European funds can be accessed through around 50 operational programs, which cumulate 8.7 billion EUR dedicated to improving energy efficiency.

Most of these funds are awarded as non-repayable grants, although financial instruments – such as guarantees for loans - are gaining ground. The lion's share of the funds target projects developed for the public sector, followed by refurbishing projects for the residential sector. Some of the Member States in the CEE region also offer energy efficiency funding to SMEs or large companies that invest in energy efficiency.

Although each country has enough leeway to adapt its European funded program to its own context, all of the operational programs must

comply with expenditure and project eligibility rules established by European legislation. In most cases, the projects selected for funding are traditional refurbishment projects, based on proven technology, with little room for more innovative approaches.

Albania and Serbia, as Candidate Countries for the European Union, can access European funding through territorial cooperation programs, which often fund small trans-border cooperation programs between an EU member state and a non-EU member state. The projects selected are generally small sized, demonstrative projects. Large refurbishment projects are generally not eligible for funding in these two countries.



[Figure 1 - Allocation of ESIF Funds for Energy Efficiency projects [based on JRC open data, see appendix 1]

Relevant operational programs:

Country	Operational Program	Budget (mil. EUR)
Austria	OP Investment in Growth and Employment Austria	93.5
	Interreg Va Austria – Slovenia	1.5
	Interreg Va Austria – The Czech Republic	2
	Interreg Va Germany – Austria – Switzerland – Liechtenstein	1
	Interreg Central Europe	9
Bulgaria	OP Regions in Growth	287
	OP Innovation and Competitiveness	183
Croatia	OP Competitiveness and Cohesion	322
	Territorial Cooperation Mediterranean	0.5
The Czech Republic	Interreg Central Europe	8
	OP Transport	33
	OP Environment	528
	OP Enterprise and Innovation for Competitiveness	747
	OP Prague – Growth Pole	36
	Integrated Regional Operational Program	622
	Interreg Va Austria – The Czech Republic	1
Hungary	Interreg Central Europe	7
	OP Economic Development and Innovation	430
	OP Environmental and Energy Efficiency	457
	OP Territorial and Settlement Development	248
	OP Competitive Central-Hungary	26
Poland	OP Infrastructure and Environment	605
	16 Regional Operational Programs	1,902
	Interreg V-A - Poland-Denmark-Germany-Lithuania-Sweden (South Baltic)	1.5
	Interreg Central Europe	16
	Territorial Cooperation Baltic Sea	16
Romania	OP Large Infrastructure	250
	OP Regional	1,001
Slovakia	OP Quality of Environment	588
	Integrated Regional Operational Program	110.5
	OP Research and Innovation	3.5
	Interreg Central Europe	4
Slovenia	OP for the Implementation of the EU Cohesion Policy in the period 2014 – 2020	187
	Interreg V-A - Italy-Slovenia	1
	Interreg V-A - Slovenia-Austria	1
	Interreg Central Europe	0.5

Energy Performance Contracting (EPC)

In the CEE region, projects in the ESCO markets have either not yet started, are still at a preliminary or pilot stage, or are only few in number.

The exception to this is the Czech Republic with a well-developed ESCO market and a growing trend:



The new European definition of public debt (which includes capital expenditure related to EPC projects) has constituted a major obstacle to public projects. Public decision-makers are reluctant to consider EPC as a way to implement energy efficiency investments. Thus, instead of complex solutions with guarantees, they implement partial solutions (most of which in emergency conditions) or implement complex projects financed from grants (mostly ESIF) without guaranteed savings.

 Although the **Czech Republic** has a relatively small number of EPC providers (8 -10), the number of EPC projects implemented is large and the country is considered to be experienced. The public sector represents the main client for now, but it is considered to be a possible source for EPC in other sectors.

 In **Bulgaria**, the market is considered very small and public EPC projects are seen to be prone to problems. As the EPC market is based mainly on the public sector, the inclusion of EPC in public debt, in addition to the strict thresholds for local public debt, is very destructive. As long as key barriers can be removed, the Bulgarian EPC market is expected to grow in the next 4-5 years, with more EPC providers entering the market.

 In **Croatia**, the EPC market is still minor, but the trend is increasing, with an estimated number of 10 EPC projects implemented in the past few years and around 60 EPC projects in the pipeline. However, the new European rules for public debt accounting, which assimilate EPC projects to public debt, is seen as a major problem, as public players shy away from increasing on balance-sheet expenditure.

 The **Slovenian** public EPC market is expected to grow further, although currently the market is small (4 – 6 EPC providers).

 Despite a relatively well-functioning EPC market, projects in **Slovakia** have stopped within the past year due to the introduction of state grants for investments by the same beneficiaries.

 **Austria** is considered to be a well established market, with a large number of ESCOs (41), as well as EPC providers (15-20). The public sector is the main client for EPC and large public EPC projects are expected to continue. Municipalities are considered by EPC providers to be reliable partners for long term contracts with a great potential for energy efficiency improvements. The public sector also plays an exemplary role for other sector clients and has exerted a scale of economies effect on the

EPC market. However, smaller public EPC projects are not seen as sufficiently attractive at the moment. There are an estimated 25 – 28 EPC projects per year.



Hungary used to have a relatively well-functioning EPC market in the public sector, but the trend has clearly halted and the private sector has become the main client for EPC projects. The regulatory instability and public liquidity problems (involving also non-payment issues) have caused problems. There is a clear expectation for grants to be awarded to EPC projects in the public sector, which severely limits the market's potential.



In **Poland** and **Romania**, the growth of the EPC market is considered to be on stand-by for the near future, due to current market conditions. Poland has around 10 – 15 EPC providers, while Romania is still taking its first steps on the EPC market, with less than 10 EPC providers. The energy services market in Poland continues to struggle to tap the opportunity lying in the very large energy saving potential in almost all end-use sectors. Despite repeated efforts the market remains poorly developed and EPC remains uncommon in Poland, with only a few large international ESCO offering EPC services.

The ESCO market, and in particular the EPC sector, is stagnant in Romania. Energy savings potential in public buildings is still largely untapped. Local governments are not able to take

EPC/ESCO models into consideration, even if there were to be interest in implementing one.



Albania offers significant potential for energy efficiency in the public sector, some of which could be addressed through ESCO projects. However, the commercial case has yet to be developed. On the one hand, public authorities often do not have a strong incentive and commercial case for energy efficiency investments or initiating ESCO projects, as energy payment discipline is weak even in the public sector.

In addition, low political support and unclear regulatory framework are remaining barriers. Establishing a regulatory and commercial basis for energy efficiency is required for further energy efficiency investments, including through ESCO projects.



Only very few EPC projects have been prepared or implemented at the level of municipalities in **Serbia**, most of them on street lighting. Only a few of the companies in Serbia that operate in the field of energy efficiency are registered as consultants and are not considered as ESCO. The third energy efficiency action plan in Serbia recognizes the importance of energy efficiency and operations of ESCO, and emphasizes the possibility of founding public ESCOs in the future. The law on Efficient Use of Energy and its by-law act prescribes two models of EPC which refer only to improvements of energy efficiency of public buildings and street lighting.

[Based on data presented in the Practices and opportunities for Energy Performance Contracting in the public sector in EU Member States publication (see appendix 1)]



EU Level Support for Energy Efficiency

Horizon 2020

Horizon 2020 is the EU's main funding program for research and innovation, also for research projects related to energy efficiency. With a generous budget of over 80 billion EUR for the period 2014-2020, it offers funding to the most innovative initiatives aiming to solve challenges in the eligible sectors, including energy efficiency. The relevant calls for projects for energy efficiency during 2018 – 2020 are:

- **LS-SC3-EE-1-2018 – 2019 – 2020: Decarbonisation of the EU building stock: innovative approaches and affordable solutions changing the market for building renovation**
Funds for research into new technologies, processes and business models relating to comprehensive renovations of buildings. The size of expected projects ranges between 3 - 4 million EUR.
- **LS-SC3-EE-2-2018-2019: Integrated home renovation services**
Projects should aim to cover the skills gap that public authorities, individuals and businesses face with regards to setting up, implementing and financing energy efficiency projects. Projects should aim to develop innovative local or regional “integrated home renovation services”.
- **LS-SC3-EE-4-2019-2020: Upgrading smartness of existing buildings through innovations for old equipment**
Proposals should develop and demonstrate cost-effective technological solutions to manage energy within existing buildings and interact with the grid providing energy efficiency, flexibility, generation and storage, based on user preferences and requests.
- **EE-9-2018-2019: Innovative financing for energy efficiency**
Proposals should address the development or replication and implementation of innovative financing schemes for energy efficiency investments.
- **EE-10-2018-2019: Mainstreaming energy efficiency finance**
Proposals should aim to develop frameworks for the standardization and benchmarking of sustainable energy investments or capacity building for banks and investors, in particular with regards to underwriting sustainable energy investments, etc.
- **EE-11-2018-2019: Aggregation – Project Development Assistance**
Project Development Assistance (PDA) to build technical, economic and legal expertise of public and private project promoters, with the final aim of launching investments.
- **LS-SC3-EE-13-2018-2019-2020: Enabling next-generation of smart energy services valorizing energy efficiency and flexibility on the demand-side as energy resource**
Projects should aim to enhance and refine successful energy performance contracting models, include pay-for-performance schemes and/or include customer individualized energy services.
- **LS-SC3-EE-16-2018-2019-2020: Supporting public authorities to implement the Energy Union.**
Includes support for the implementation of the Energy Efficiency Directive.

[Based on the Horizon 2020 Work Programme for 2018 – 2020 (see appendix 1)]

Financial instruments

European Fund for Strategic Investment

EFSI (better known as the “Juncker Plan”) is an initiative launched jointly by the EIB Group and the European Commission to help overcome investment gaps in the EU. Leveraging its initial budget of 16 billion EUR as well as the additional 5 billion EUR allocation from the EIB, the EFSI aims to support investments worth 315 billion EUR by 2018.

With EFSI support, the EIB group focuses on sectors of key importance for the European

economy, including renewable energy and resource efficiency. There are no geographic or sector quotas, projects are being considered based on their individual merits.

Eligible applicants: public and private sector entities, banks, national promotional banks and other financial institutions, funds and any other form of collective investment vehicles, investment platforms.

European Investment Bank (EIB)

The EIB supports the EU's goal of increasing energy efficiency in the Union by 20 % by 2020, by financing projects that typically include retrofitting and expansion of existing social and urban infrastructure and services. The EIB financial products for energy efficiency include among others:

European Energy Efficiency Fund: The EEE-F is a 265 million EUR innovative public private partnership dedicated to mitigating climate change through energy efficiency measures and the use of renewable energy in the member states of the European Union.

The fund provides debt, equity and guarantee instruments, as well as technical assistance grants to support project development. Around 70% of the funding is intended for energy efficiency projects, with the remainder allocated to renewable energy and clean urban transport. The fund aims at bringing already well-proven technologies to the mainstream, and at strengthening the European ESCO market and the use of energy performance contracting.

The EEE-F is present, for instance, in Romania, having provided a refinancing facility to Banca Transilvania (BT) for a green on-lending pro-



gram to support energy efficiency and renewable energy investments by the public sector in Romania.

Marguerite II Fund: It aims to support green-field and brownfield infrastructure investments in renewable energy, transport and digital infrastructure. Marguerite II has a capacity to invest in projects across the EU and in the pre-accession countries, and has a 10-year fund life (with up to 2 one year extensions). Marguerite II has invested in Croatia, Poland and Romania, mostly in renewable energy projects. In the Energy Efficiency sector, Marguerite II

focuses on public lighting, energy efficiency in industrial facilities and SMEs, high efficiency co-generation of heat and power, district heating and cooling, as well as energy savings in buildings.

Green Initiative: This program is a joint EIB and European Commission initiative for energy efficiency projects by small and medium sized enterprises in EU Member States and pre-accession countries. The program offers support to energy efficiency investments in both the residential and non-residential sector, as well as in renewable energy production and distribution. It offers EIB-loans at attractive rates, channeled through participating intermediaries, as well as grants from the European Commission of up to 15% (or 150.000 EUR) of the EIB loan. In addition, independent experts provide technical assistance to SMEs and intermediaries to support project identification, planning and implementation. The program is active in the CEE region through selected intermediaries in Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia.

JASPERS: JASPERS is a technical assistance partnership between the EIB and the European Commission. It focuses on large projects with total costs exceeding 50 million EUR for environmental projects. JASPERS is available to EU Member States, as well as some candidate countries (including Albania and Serbia).

ELENA: Established in 2009, ELENA is a joint initiative by the EIB and the European Commission under the Horizon 2020 program. ELENA provides grants for technical assistance focused on the implementation of energy efficiency, distributed renewable energy and urban transport projects and programs. The grants offer funds during the preparatory stages of the selected projects, enabling the development of feasibility and market studies, business plans and energy audits, as well as tendering procedures and contractual arrangements.

INNOVFIN: InnovFin – EU Finance for Innovators - is a joint initiative launched by the European Investment Bank Group (EIB and EIF)

in cooperation with the European Commission under the Horizon 2020 Program. InnovFin aims to facilitate and accelerate access to finance for innovative businesses and other innovative entities in Europe.

- Eligible applicants: SMEs, large companies, research institutions
- Countries: EU Member States and associated countries (including Albania and Serbia)
- Eligible sectors: all Horizon 2020 sectors (including energy efficiency)

Smart Finance for Smart Buildings: The initiative aims to offer a model of guarantee facilities that can combine different public funding streams, including the European Structural and Investment Funds and the European Fund for Strategic Investments. The goal is to encourage commercial banks to develop financial products that target the energy efficiency refurbishment of buildings. Smart Finance for Smart Buildings also recognizes Energy Performance Contracting as a useful and promising tool for renovating the existing building stock.

Private Finance for Energy Efficiency (PF4EE): The instrument is designed to cover the existing gap in commercial financing for energy efficiency investments.

Jointly designed by the EIB and the European Commission, the instrument targets projects which support the implementation of National Energy Efficiency Action Plans or other energy efficiency programs of EU Member States. PF4EE is managed by the EIB and funded through the LIFE+ 2014-2020 program.

The LIFE+ Program committed 80 million EUR to fund the credit risk protection and expert support services. The EIB will leverage this amount, making a minimum of 480 million EUR available in long term financing. In the CEE Region, the program is active for instance in the Czech Republic, through Komerční Banka. It offers loans and guarantees to start-ups, SMEs, and mid-caps for investments improving energy efficiency.

European Bank for Reconstruction and Development (EBRD)

Green Economy Financing Facility (GEFF):

Through a network of more than 130 local financial institutions in 24 countries, GEFF has invested more than 4 billion EUR, offering credit lines to local commercial banks for on-lending to green investments. In addition to funding the

investments themselves, GEFF also offers technical assistance to the intermediary institutions and their clients. GEFF is active in Bulgaria, Croatia, Hungary, Poland, Romania, Serbia and several other countries.

Financial instruments active in the CEE Region:

Country	Program	Budget (mil. EUR)	Website
Albania	WeBSEFF	n/a	http://wb-reep.org/eng/about
Bulgaria	Residential Energy Efficiency Credit Line (REECL)	158.9	www.reecl.org
	Commercial Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL)	155	http://beerecl.com/cms/
	Bulgarian Energy Efficiency for Competitive Industry Finance Facility	75	http://www.ebrd.com/work-with-us/projects/psd/energy-efficiency-for-competitive-industry-financing-facility.html
	EU-EBRD Energy Efficiency Finance Facility (EUEEFF)	124	http://www.ebrd.com/work-with-us/projects/psd/eueeff-energy-efficiency-framework.html
Croatia	REENOVA+ supporting energy efficiency investments in the residential sector	60	http://www.reenovaplus.hr/
	WeBSEFF	n/a	http://wb-reep.org/eng/about
Hungary	Municipal Energy Efficiency Facility (MFFEE)	17	https://ebrdgeff.com/seff_facilities/municipal/
Poland	Polish Residential Energy Efficiency Financing Facility	200	http://www.polreff.org/?sLanguage=en
	Polish Sustainable Energy Financing Facility (PolSEFF2)	200	http://www.polseff2.org/en/about-polseff2
Romania	Municipal Energy Efficiency Facility (MFFEE)	17	https://ebrdgeff.com/seff_facilities/municipal/
	Green Economy Financing Facility for the Residential sector	85	https://ebrdgeff.com/romania/
	Romanian Fund for Energy Efficiency	95	
Serbia	WeBSEFF	n/a	http://wb-reep.org/eng/about
Slovakia	SlovSEFF III	100	www.slovseff.eu

[Based on data presented on the EIB, EBRD and REEP for the Western Balkans websites (see appendix 1)]

Regional Energy Efficiency Program (REEP) for the Western Balkans

In June 2012, the European Commission together with international financial institutions (CEB, EBRD and EIB) and other bilateral donors approved a 23.35 million Euro grant to the EBRD to establish the Regional Energy Efficiency Program for the Western Balkans. The current REEP supports participating countries (including

Albania and Serbia) to achieve their sustainable energy objectives as set out in the National Energy Efficiency Action Plans (EU Member States and Candidate Countries are required to set up a National Energy Efficiency Action Plan and periodically report progress on their implementation to the CE). The program has three pillars:

Pillar 1 - Policy dialogue and project preparation support

- **Total budget:** 6 mil. EUR
- **Type of intervention:** technical assistance
- The funds are intended to facilitate intensive policy dialogue with the authorities in the region and to support public authorities to prepare energy efficiency ESCO projects. The work aims to set up the regulatory frameworks and overcome market barriers that will catalyze investment in energy efficiency and allow energy service companies (ESCO) markets to emerge. This pillar is further divided into two thematic areas: ESCO support and general policy dialogue

Pillar 2 - Credit line facility (WeBSEFF II)

- **Total budget:** 92 mil. EUR
- **Type of intervention:** loans to local financial institutions
- The funds must be used for loans for smaller scale energy efficiency and renewable energy projects. Both public and private sector actors, including ESCOs, can be borrowers.

Pillar 3 - Direct financing facility (WeBSEDF)

- **Total budget:** 50 mil. EUR
- **Type of intervention:** loans to final beneficiaries
- The funds are invested in both medium-scale renewable energy and energy efficiency improvements in industrial enterprises. Furthermore, the facility intends to provide financing to ESCO projects. Depending on the country, the loans offered range from 1 to 6 million EUR.

For more information: <http://wb-reep.org/eng/about>

National Grants and Incentives

Albania

The Albanian Government has set up the framework for several programs supporting energy efficiency in the public and residential sectors – these programs are currently not yet operational:

1. **Refurbishment program for public service buildings** – investments made at central and local levels through ESCOs
2. **Promotion of Solar Collector Systems for Heating of Sanitary Water**
3. **Promotional instruments for the installation of solar water heating in households** – the program includes a credit line for installing solar water heating, as well as training for installers. The program is funded through a credit of 4.5 million USD secured from EBRD and local banks.
4. **Subsidy scheme for comprehensive refurbishment of multi-family houses**

[Based on data included in the Albanian National Energy Efficiency Action Plan 2010 – 2018 (see appendix 1)]

As an EU Candidate Country, Albania has access to EU funding through the Instrument for Pre-Accession and the territorial cooperation programs, implemented in cooperation with neighboring EU Member States:

1. **Interreg IPA CBC Greece - Albania Budget for environment & climate change adaptation:** 3.6 million EUR

Finances small scale (pilot) investments in energy efficiency and use of RES in public buildings and public spaces, as well as joint public awareness initiatives for energy efficiency and the use of RES in residences and businesses.

2. **Interreg IPA CBC Italy – Albania – Montenegro**

Budget: 3.94 million EUR

Finances the realization of feasibility studies, identification of financial opportunities and implementation of pilot initiatives for meeting the energy efficiency goals of public buildings.

3. **Interreg Vb Mediterranean**

Budget: 44.8 million EUR (for the entire priority axis, not just energy efficiency)

Promotes the use of renewable energy and energy efficiency in public buildings in the Mediterranean area (Portugal, Spain, France, Italy, Slovenia, Croatia, Bosnia-Herzegovina, Montenegro, Albania, Greece, Cyprus). The program offers funding for strategy building, capacity building, awareness raising, training and changing practices, feasibility studies and analyses, elaborating policy plans and tools, as well as small scale investments and pilot projects.

[Based on data included in the programming documents for cross-border, transnational and interregional cooperation programmes of the European Union (see appendix 1)]



Austria

- 1. Residential building, energy and environmental subsidies** from the provinces for refurbishment of residential buildings and private households
Budget: 25.3 million EUR in 2015, out of which 710 million EUR for renovations.
Subsidies are awarded to private households to improve the thermal quality of residential buildings and to acquire efficient heating systems. The level of subsidy is dependent on the thermal quality achieved or the efficiency of the heating system. The nature of the support differs from province to province and is provided in the form of loans, grants and/or subsidies.
- 2. Domestic environmental support (UFI)** for industry and services, as well as non-residential buildings
Budget: 90 million EUR / year from federal funds. In addition, the program is co-financed from the European Regional Fund for Development through the IWB program for Austria. More so, provinces grant additional funds of varying degrees.
Subsidies are awarded to companies for investments in energy efficiency projects in addition to funding for initial consultations and implementation advice. The subsidies consist of an investment grant of up to 30% of the investment costs. Eligible projects can target commercial and industrial energy efficiency investments, either in the production processes or in the existing buildings. In addition to these national initiatives, all the provinces offer energy advice and support programs for enterprises, in particular the regional programs co-financed by the EU.
- 3. The Austrian Federal Government's renovation drive for buildings**
Budget: 43.5 million EUR in 2016.
Through one-off, non-repayable grants offered, the program has become an important financial instrument for companies and private individuals that strive to reduce their energy consumptions.
- 4. Klimaaktiv mobile** for the transport sector
Budget: 10 million EUR / year
The program was introduced in 2013 and it focuses on supporting efficient environmentally friendly mobility through mobility management, the conversion of vehicle fleets to alternative propulsion systems, electro-mobility and the encouragement to cycle, innovative public transport services and a fuel-saving, energy-efficient driving style. The program offers advice, awareness raising, training, certification and partnerships, as well as financial support in the form of grants.
- 5. Climate and Energy Fund (KLI.EN)** for services, industry, transport, public bodies / municipalities / regions
Budget: 105 million EUR for 23 sub-programs (not just for energy efficiency actions)
The Climate and Energy Fund (KLI.EN) supports the implementation of the national climate policy, focusing on seven areas: research and development, E-mobility, renewable energy, transport and mobility, energy efficiency, model regions and building and renovation. KLI.EN offers support for the development of more energy efficient products and services, as well as market up-take measures for new energy efficient technologies.

[Based on data included in the Austrian Second National Energy Efficiency Action Plan (see appendix 1)]

Bulgaria

- 1. National Renovation Program for Residential Buildings in Bulgaria 2006 – 2020**
Total budget 2006-2020: 500 million EUR
Eligible applicants: single-family and multi-family home owners
Type of funding:
 - grants covering up to 100% of eligible costs for home renovation
 - facilitated access to loans for renovations
 - technical assistance to the voluntarily associated homeowners of entire buildings for the organization of the renovation process
- 2. Fiscal incentive program for households**
Eligible applicants: home owners
Type of funding: building tax exemption for 3 - 7 years, depending on the energy efficiency classification of the building
- 3. EEA & Norwegian Grants - Energy Efficiency Program**
Total budget 2014-2021: 28 million EUR
Eligible applicants: companies investing in renewable energy and in more energy efficient production processes
Type of funding: grants

[Based on data included in the Bulgarian National Energy Efficiency Action Plan 2014 – 2020 (see appendix 1)]

Croatia

The Environmental Protection and Energy Efficiency Fund (EPEEF) finances energy efficiency programs, in line with the National Energy Efficiency Action Plan:

- 1. Program of energy renovation of family homes**
Total budget 2014–2020: 193 million EUR. Starting with 2016, the program can also be funded through the Structural Funds, and the details are still being decided.
Eligible applicants: natural persons
 - 2. Program of energy renovation of multi-residential buildings**
Total budget: 36.12 million EUR. Starting with 2016, the program can also be funded through the Structural Funds (through the Operational Program Competitiveness and Cohesion).
Eligible applicants: natural persons
Type of funding: grants covering up to 60% of the eligible costs
- 
- 3. Program of energy renovation of non-residential commercial buildings**
Eligible applicants: companies intending to renovate existing commercial, non-residential buildings, primarily those built before 1987, with an annual heating energy consumption of more than 300 kWh/m².
Type of funding: grants and interest-free loans
 - 4. EEA & Norwegian Grants - Energy Efficiency Program**
Total budget 2014 - 2021: to be decided
Eligible applicants: companies investing in renewable energy and in more energy efficient production processes
Type of funding: grants

[Based on data included in the Croatian Fourth National Energy Efficiency Action Plan for 2017 – 2019 (see appendix 1)]

The Czech Republic



1. New Green Savings 2014 – 2020

Total budget: 1 billion EUR

Eligible applicants: single family and multi-family home owners

Type of funding: grants covering 30 – 55 % of the eligible costs, capped at 20.000 EUR.

2. ENER G Program

Total budget: 4.78 million EUR

Eligible applicants: SMEs located in Prague

Type of funding: Loans with 0 % interest rate, with the option of postponing repayments by 2 years and a maturity of up to 10 years.

3. State Program to Support Energy Savings – EFEKT

Total budget 2017 - 2021: 60 million EUR

Eligible applicants: Municipalities and/or

private / public companies providing municipal services, private enterprises, NGOs, associations of legal persons.

The program has 2 sub-components, one supporting investment projects and one supporting non-investing initiatives (awareness campaigns, information centers, publications, etc).

Type of funding: grants covering 50 – 100 % of the eligible costs

4. Reasonable energy savings

Eligible applicants: owners of family and apartment buildings; private and public sector existing building owners

Type of funding: technical assistance for preparing projects funded under the EFEKT Program.

[Based on data included in the National Energy Efficiency Action Plan of the Czech Republic (see appendix 1)]

Hungary



1. Corporate tax incentive:

Eligible applicants: companies that implement energy efficiency investments are eligible for either a one-time tax benefit in the year of the investment or 5 years of incentives.

Type of funding: corporate tax exemption of up to 30% of the eligible costs (capped at 15 million EUR). The intensity rate increases by 20% for small enterprises and 10% for medium-sized enterprises.

2. Warmth of Home Program

Sub-programs and types of projects:

- Replacement of large household appliances in order to save energy (1.6 million EUR) – supports the replacement of large household appliances for vulnerable groups.
- Heating Modernization (boiler replacement) (3.18 million EUR) – supports the purchasing and installation of heating systems employing condensing boiler technology

- Replacement of energetically-obsolete façade doors and windows (3.5 million EUR) – supports the replacement of old doors and windows with newer ones.
- Support for complex energetic refurbishment of blocks of apartments (31.8 million EUR)
- Replacement of large household appliances (6.37 million EUR)
- Support for complex energetic refurbishment of detached houses

The sub-programs are subject to change on a periodic basis. The list above represents the list of calls for projects already organized in the past under the Warmth of Home Program.

3. EEA & Norwegian Grants - Energy Efficiency Program

Total budget 2014 - 2021: to be decided

Eligible applicants: companies investing in renewable energy and in more energy efficient production processes

Type of funding: grant

[Based on data included in the Hungarian National Energy Efficiency Action Plan until 2020 (see appendix 1)]

Poland



1. **Thermo-renovation and Repairs Fund**
The program offers grants for renovation and repairs of existing buildings (mostly multi-family homes and public buildings). The program is administered by the National Economy Bank (BGK). The current annual budget is 49 million Euro.
2. **Subprogram Rys – Thermo-renovation of single-family residential buildings**
The program offers grants only for the renovation of single-family residential buildings. The total budget for 2015 – 2020 is 95 million EUR.
3. **Suprogram Kawka**
The program is dedicated mainly to Local Government Units and supports - among other activities - thermal renovation of multi-

family buildings, as well as educational campaigns. The program has a budget of 190 million EUR for 2014 – 2020.

4. **Subprogram for Energy-savings investments in small and medium-sized companies**
The program supports projects developed by SMEs, improving energy efficiency, including through thermo-renovation of buildings. The budget for the 2014 – 2017 period is 14 million EUR.
5. **EEA & Norwegian Grants - Energy Efficiency Program**
Total budget 2014 - 2021: 140 million EUR
Eligible applicants: companies investing in renewable energy and in more energy efficient production processes
Type of funding: grants

[Based on data included in the Financing Building Energy Performance Improvement in Poland study (see appendix 1)]

Romania



1. **National Program for increasing energy performance of residential buildings**
Total budget: 8.8 million EUR in 2017 from the state budget (covering 50% of the funding gap), supplemented by funds from local municipalities (covering 30% of the funding gap). Annual allocations are subjected to approvals.
Eligible applicants: multi-family buildings via local municipalities
Type of funding: grants covering up to 80% of eligible costs
2. **EEA & Norwegian Grants - Energy Efficiency Program**
Total budget 2014 - 2021: 62.8 million EUR
Eligible applicants: companies investing in renewable energy and in more energy efficient production processes
Type of funding: grants

3. **Rabla Plus Program**
Total budget 2017 – 2019: 23.6 million EUR in 2017. The budget for each call for applicants is decided annually.
Eligible applicants: natural and legal persons purchasing electric or hybrid vehicles receive vouchers covering part of the acquisition costs
Type of funding: vouchers.
4. **Program for setting up recharging stations for electric cars**
Total budget: The budget for each call for projects is decided annually. The budget for the previous Call for projects (2016) was 205 000 EUR.
Eligible applicants: public authorities and companies in cities with more than 50.000 inhabitants
Type of funding: grants of up to 80% of eligible costs, capped at 900.000 lei / applicant

[Based on data included in the Romanian Environment Fund Administration website (see appendix 1)]

[Based on data included in the Renovating Romania – A Strategy for the Energy Renovation of Romania's Building Stock study (see appendix 1)]

Serbia

1. **Budgetary fund for energy efficiency:**
Budget: 1.4 million EUR/year. The program must be approved annually by the Government

Eligible beneficiaries: municipalities (one-project, one-municipality principle).

European Funds – Instrument for Pre-Accession

1. **Interreg IPA CBC Croatia – Serbia 2014 – 2020**
Budget: 12 million EUR
It supports pilot and demonstration projects on innovative technologies and solutions in the field of sustainable energy and energy efficiency, as well as investments in joint infrastructures in sustainable energy and energy efficiency.
2. **Interreg Vb Danube**
Budget: 42.4 million EUR (for the entire priority axis, not only energy efficiency)
This supports the development of common strategies and frameworks, as well as small scale investments in energy efficiency.

[Based on data included in the programming documents for cross-border, transnational and interregional cooperation programmes of the European Union (see appendix 1)]

Slovakia

Established in 1996, the State Housing Fund is the main source of funding for building stock refurbishment in Slovakia. The Fund offers funding to private individuals, households and associations of apartment owners, who can choose between non-repayable grants or favorable loans to improve the thermal insulation of residential buildings. The program is partly funded through the European Structural and Investment Fund.

There is no other independent, state-funded, energy efficiency program.

1. **EEA & Norwegian Grants – Energy Efficiency Program**
Total budget 2014 - 2021: to be decided
Eligible applicants: companies investing in renewable energy and in more energy efficient production processes
Type of funding: grants

[Based on data included in the Slovak National Energy Efficiency Action Plan 2014 – 2020 (see appendix 1)]



Slovenia

1. **Slovenian Environmental Public Fund – Eco Fund**

Eligible applicants: natural persons and legal entities

Types of projects supported: energy efficiency and renewable energy projects

Type of support:

- loans to legal entities (municipalities and/or providers of public utility services, enterprises and other legal entities)
- loans to individuals (households) for renewable energy projects
- grants to individuals (households) for investments in electric cars and energy efficiency refurbishments
- grants to legal entities (municipalities and/or

providers of public utility services, enterprises and other legal entities) for investments in electric cars, buses for public transport running on compressed natural gas or biogas

- grants to municipalities for investment in buildings where education takes place, newly constructed and passive buildings or renovated to a passive standard

2. **EEA & Norwegian Grants - Energy Efficiency Program**

Total budget 2014 - 2021: to be decided

Eligible applicants: companies investing in renewable energy and in more energy efficient production processes

Type of funding: grants

Financial instruments

Slovenian Export and Development Bank (SID Bank) provides favorable long-term resources for the realization of programs on the efficient use of energy and renewable energy through commercial banks:

1. **Program for financing investments of natural persons in energy efficiency in housing stock:**

- Eligible applicants: home owners, building managers and residential communities / associations of property owners investing in energy efficiency or renewable energy
- Type of funding: maturity loans for up to 15 years. The loan can be combined with other banking sources and purposes. The loan can cover up to 75% of the cost of the project (max. 22.500 Euro for natural persons and 112.500 Euro for legal entities)

2. **Program for the development of an environmentally friendly company and production**

- Eligible applicants: companies and other legal entities established under private law, as well as legal entities governed by public law.
- Type of funding: maturity loan for up to 15 years with favorable interest rates. The loan can cover up to 85% of the eligible costs of the investment.

[Based on data included in the Slovenian National Energy Efficiency Action Plan 2014 – 2020 (see appendix 1)]

Appendix 1

Chapter	Source of data
European Structural and Investment Funds	Open data collected by JRC for the European Commission, available at http://s3platform.jrc.ec.europa.eu/esif-viewer (viewed in February 2018)
Energy Performance Contracting (EPC)	Based on Boza-Kiss Benigna, Zangheri Paolo, Bertoldi Paolo, Economidou Marina, Practices and opportunities for Energy Performance Contracting in the public sector in EU Member States, EUR 28602 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-68832-4, doi:10.2760/49317, JRC106625
EU Level Support for Energy Efficiency:	
Horizon 2020	Horizon 2020 Working Program 2018 – 2020, Energy, available at http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-energy_en.pdf (viewed in March 2018)
European Fund for Strategic Investment (Junker Plan)	Based on data available at http://www.eib.org/efsi/what-is-efsi/index.htm (viewed in March 2018)
European Investment Bank:	
European Energy Efficiency Fund	Based on data available at https://www.eeef.eu/home.html (viewed in March 2018)
Marguerite II Fund	Based on data available at http://www.marguerite.com (viewed in March 2018)
Green Initiative	Based on data available at http://www.eib.org/projects/priorities/climate-and-environment/green-initiative.htm (viewed in March 2018)
JASPERS	Based on data available at http://jaspers.eib.org/ (viewed in March 2018)
ELENA	Based on data available at http://www.eib.org/products/advising/elena/index.htm (viewed in March 2018)
INNOVFIN	Based on data available at http://www.eib.org/products/blending/innovfin/index.htm (viewed in March 2018)
Smart Finance for Smart Buildings	Based on data available at https://ec.europa.eu/info/news/smart-finance-smart-buildings-investing-energy-efficiency-buildings-2018-feb-07_en (viewed in March 2018)
Private Finance for Energy Efficiency (PF4EE)	Based on data available at http://www.eib.org/products/blending/pf4ee/index.htm (viewed in March 2018)
EBRD – Green Economy Financing Facility (GEEF)	Based on data available at https://ebrdgeff.com/ (viewed in March 2018)
REEP for Western Balkans	Based on data available at http://wb-reep.org/eng/about (viewed in March 2018)
National Grants and Incentives	Country profiles are developed based on: <ul style="list-style-type: none"> - data included in the mandatory National Energy Efficiency Action Plans (NEEAP) for each country, available at https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans (viewed in March 2018) - Europe's Buildings under the Microscope, A country by country review of the energy performance of buildings - Building Performance Institute Europe, 2011
Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia (EEA & Norway Grants Funding)	Description based on information included in the programming documents for EEA & Norway Grants for 2014 – 2021 for each of the analyzed countries. The programming documents can be accessed at https://eeagrants.org/How-to-apply (viewed in March 2018)

Albania, Serbia (Instrument for Pre-Accession Funding)	Description based on information included in the programming documents for the cross-border, transnational and interregional cooperation programs available for Albania and Serbia, accessible at https://www.keep.eu/keep/ (viewed in March 2018)
Poland	Based on Financing Building Energy Performance Improvement in Poland - Building Performance Institute Europe, 2016
Romania	Based on Renovating Romania – A Strategy for the Energy Renovation of Romania’s Building Stock - Building Performance Institute Europe, 2014



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