

Investing in Sustainable Energy Has Never Been So Easy

The Regional Energy Efficiency Programme supports SMEs, municipalities, households and citizens in reducing energy consumption while contributing to regional economic growth.

The Western Balkans, like other transition economies, are characterised by high energy inefficiency that is three times larger than the EU average. Not only does this result in higher emissions, but it also negatively impacts the region's economic competitiveness.

The International Energy Agency and World Bank estimate potential energy savings in the Western Balkans of up to 10% in the transport sector, 10-35% for households, 35-40% in the public sector, 10-30% in services and 5-25% in industry and commerce. In monetary terms, **public buildings and households in the Western Balkans alone could have yielded savings valued at €805 million by 2020** according to the Energy Community. However, not only households are benefitting from such savings. According to a REEP overview also SMEs have increased their primary energy savings by 27,127 MWh/year, bringing a reduction in the CO₂ emissions of 7,734 tonnes a year. Municipal and corporates have, as well, reduced primary energy consumption by 561,652 MWh/year dealing to a decrease of 124,629 t/year of CO₂ emissions.

Achieving such savings would have a **significant impact on trade balances and public and household budgets**; it would, moreover, enhance energy security, protect against necessary energy tariffs adjustments, and contribute to economic growth. The **potential for a cleaner energy sector is considerable**, due to the large and unused renewable energy and energy efficiency potential, and the induced effect on economies of a more reliable, more competitive, and cleaner energy supply.

In response to this untapped potential, the Regional Energy Efficiency Programme (REEP) was established in 2012 by the European Bank for Reconstruction and Development (EBRD) and the Energy Community Secretariat (EnCS) with the support of WBIF and bilateral donors. **REEP was created to support institutions in the Western Balkans to develop a competitive -and transparent- energy efficiency market.** After a successful initial phase, and continued demand by the beneficiaries, the Programme was extended with the creation of the REEP Plus to scale up activities and focus on energy efficiency in buildings. Most recently, in 2019 the European Union contributed further €30 million to the Programme and KfW Bankengruppe (KfW) joined under the REEP.

Since its inception, REEP's regional approach has fostered beneficiary involvement, which in turn promotes the sharing of experience and collaboration in finding solutions to common challenges, boosts regional economic integration and the scaling-up of business.

Keeping warm with thermal insulation

Dusan Tesevic's mother lives in Foca-Ustikolina, which is a village in the southeastern part of Bosnia and Herzegovina that is prone to long and cold winters. Her house was built in the 1980s, using concrete blocks and cement, meaning it is difficult to heat up and loses heat easily. To remedy this situation, **Dusan installed thermal insulation and a biomass boiler to improve energy efficiency in the house.** The EBRD's Green Economy Financing Facility (GEFF) provided a €1,100 grant (with support from the EU, Austria, and the

WBIF), which partially covered the €5,700 of the total investment costs. The **new equipment and technology made available through the grant have resulted in annual energy savings of 6 MWh in Dusan's house**, which also contributes to a reduction in environmental pollution.

Senija Berhatbegovic owns a small business to rent bungalows in the outskirts of Tuzla, Bosnia Herzegovina. This privileged area, close to the Majevica mountains, is well-known for its cold temperatures in winter. Therefore, the **installation of foam isolation in the walls and façade of the bungalows was indispensable for renting** in the cold months. Such energy efficiency investment was covered in full through the REEP Plus, with funding made available by KfW. **Primary energy savings have reached 60% on annual basis, which has led to the CO₂ emission reductions of 60%.**

Reducing Carbon Footprint and Electricity Costs in Serbian municipalities

The Serbian municipalities of Smederevo, Veliko Gradiste, Stara Pazova, Kovacica and Becej are only a few of REEP's many success stories in the country.

The municipality of Smederevo decided to invest €1.2 million in a 18,000 m² building used by an automotive industry manufacturer to host its production facilities and administrative offices. The building uses gas for heating and electricity for cooling. The investment, with funding from EBRD made available through REEP, was intended to improve the building's thermal insulation and hence its overall energy efficiency performance. **The completion of this project has allowed for annual energy savings in excess of €120,000 and a 60% reduction in CO₂ emissions.** The investment has a positive rate of return with a payback period of just under ten years.

Veliko Gradiste, Stara Pazova, Kovacica and Becej were facing common challenges caused by inefficient public infrastructures, due to obsolete and old-fashioned constructions. **Through REEP and REEP Plus, the municipalities have received funding for the refurbishment of their street lighting systems.** These investments have resulted in greater energy efficiency and major cost savings. **The municipalities' expenditure on electricity has halved, while at the same time CO₂ emissions have been reduced by a half on average.**

Serbia produces energy with zero waste resources

A biogas power plant in Bac, Serbia, **constructed with the support of REEP and EBRD financial assistance, is producing enough energy to power more than 3,000 households.** Around 18,000 MWh per year are produced out of agricultural residue from farms that are converted into biogas which generates electricity and heat. 'One of the best things about biogas production is that it is a sustainable, zero-waste technology and a win-win situation for all the stakeholders involved' explains Marian Holubek, owner of the biogas power plant in Serbia.

However, this project has introduced a new feature in biogas production as **solid residues from the farms are also used to produce pellets used for heating in households or industry.** Moreover, liquid residues are used as organic fertilizers by farmers. This has proved to be a **win-win situation for both the power plant and the local farmers.** 'We use corn silage to feed cows, and we sell the excess to biogas power plants. In return we get fertilizers which we use on our corn fields' confirms Vladimir Boskovic, owner of the dairy farm Boskovic Agrar in Bac.

Private sector benefiting from energy efficiency and halving energy costs

'Wood Master' is an SME in the Western Balkans producing plum jam. The heating of jam requires large amount of energy, which can be expensive, while plum stones are usually an undesired side product of this

process. This is no longer true for Ivan Stojakovic, the owner of the company. **With the help of the EBRD he discovered the low-hanging fruit of energy savings.** A €150,000 loan through REEP has allowed Wood Master to install a new biomass boiler system, fuelled by the mix of plum stones and pellets. **Now, the plum stones keep the jam warm, while significantly decreasing the operations costs, and even heating the business' offices.**

The furniture producer ‘Termal-Inzenjering’ upgraded its production equipment bringing much-needed energy savings through support provided by the EBRD’s [WeBSEFF, the Western Balkans Sustainable Financing Facility](#). **Wood briquettes made from their own production are now used for heating the factory. This has cut energy costs by almost 50%.** The company managed to **increase its production capacity, while simultaneously reducing energy consumption.** The cost savings gained from investments into thermal insulation of its buildings, windows and lighting replacement helped the company from reducing labour costs and had a positive influence on the working environment.

‘Vizus’, a Serbian door and window manufacturer, has replaced a big part of its production equipment with state of the art machinery. **The replacement has resulted in energy savings of 22% and therefore the consequent reduction in CO₂ emissions.** Besides the energy consumption related improvements, the new high precision equipment allows the machine a possibility to work on two workstations, having a big impact on the productivity of the company. **The loan, made available thanks to the KfW through the REEP Plus project, has covered more than 80% of the capital expense.**



Aleksandar Ignjatijevic

Energy Manager in Veliko Gradiste, Serbia

'The old street lighting system was inefficient. With this project we wanted to achieve a few things: to get quality street lighting and quality equipment that is efficient and less prone to failures.'



Bogoljub Bataveljic

Director of Termal-Inzenjering, Serbia

'A €150,000 loan through the REEP allowed us to install a new biomass boiler system. Although we increased our production by around 30% and we employed 30 new people, the energy cost per employee is still lower than before.'



Dusan Tesevic

Foca-Ustikolina, Bosnia and Herzegovina

'My mother's house was very difficult to heat, as it was built using concrete blocks and cement. After installing the thermal insulation and a biomass boiler, the thermal efficiency has drastically improved while lowering the negative impact on the environment.'

Senija Ferhatbegovic

Eco-Park Majevica, Bosnia and Herzegovina

'The isolation of the bungalows was indispensable for renting in the winter period. The energy efficiency investment was covered in full through the REEP+, with funding made available by KfW.'

Project beneficiaries (c) EU.

Project Description

The [Regional Energy Efficiency Programme \(REEP\)](#) is an integrated package of finance, technical assistance and policy dialogue, established by the [European Bank for Reconstruction and Development \(EBRD\)](#) and the [Energy Community Secretariat \(EnCS\)](#) with the support of the WBIF, [bilateral donors](#) and [KfW](#).

The **ultimate objective of this initiative is to create a sustainable market for energy efficiency in the Western Balkans**. REEP supports energy efficiency investments in both private and public sectors – and encourages the public sector to take a leadership role as stipulated in the countries' National Energy Efficiency Action Plans (NEEAPs), developed as part of the Energy Community process.

REEP consists of four different components:

- **Policy Dialogue** supports governments to improve the regulatory environment for investments in energy efficiency. Activities also include policy and project preparation support for public tenders for ESCO projects;
- **Intermediate funding** through the provision of credit lines to local banks for project financing and for SMEs and public sector projects on energy efficiency and renewable energies. the Green Economy Financing Facilities (GEFF) is also framed under this second window, and it provides credit lines to local

banks for project financing for businesses and households wishing to invest in green technologies;

- **Direct lending to private sector** sustainable energy projects, including renewables and ESCOs;

- **Direct financing** for the public sector to improve energy efficiency in public buildings.

Given the success of REEP, it has been upgraded to REEP Plus that will continue the work initiated in 2012 following a similar structure.

REEP Plus will continue to address policy barriers while supporting households, public and private sector to finance investments for energy efficiency and renewable energy measures, with a main focus on the residential sector.



Genoveva Ruiz Calavera

Director for Western Balkans, DG NEAR,
European Commission

'The EU plays a key role in supporting the development of energy efficiency finance in the region, working with IFIs and governments to dismantle regulatory barriers and to provide funding and incentives. The impact is visible: contributing to economic growth and national energy efficiency targets.'



Dr Nigel Jollands

Associate Director, Energy Efficiency & Climate
Change, EBRD

'The potential benefits that energy efficiency can deliver in the Western Balkans are undeniable. While countries are making some progress in improving energy efficiency, significant barriers remain. More effort is required of both the government and private sector to capture the energy efficiency benefits.'



Christoph Tiskens

Director Southeast Europe and Turkey, KfW

'Energy Efficiency is the 'first fuel', and investments to improve it deserve utmost importance and priority. We are thus grateful and proud to be part of the EU-funded REEP+ Programme which promotes the energy efficiency. It is also an opportunity to bring in and share decades of experience from our domestic activities.'



Violeta Kogalniceanu

Head of Infrastructure and Energy Efficiency Unit,
Energy Community

'REEP is the Western Balkans flagship programme for energy efficiency and small renewables and represents a unique set-up of tailored technical support, investment incentives and the Green Economy Financing Facility.'

Stakeholders of the WBIF funded project (c) EU.

Building the European Future Together

The WBIF is a joint initiative of the **European Commission**, the **Council of Europe Development Bank** (CEB), the **European Bank for Reconstruction and Development** (EBRD), the **European Investment Bank** (EIB), **bilateral donors** and **Western Balkans beneficiaries** launched in December 2009 with the **purpose to deliver finance and technical assistance for strategic investments**. The KfW and the World Bank

subsequently joined the platform. In December 2018, the Agence Française de Développement (AFD) became a participating organisation in the WBIF.

The WBIF **blends grants, loans and beneficiary contributions for infrastructure investments in the energy, environment, social, transport and digital sectors as well as for private sector development**. Together with the Western Balkans beneficiaries, the WBIF forms a **unique partnership**, which defines priorities and support packages for strategic investments and institutional reform in the region. It **contributes to the European perspective of the Western Balkans** by supporting investments that improve competitiveness and growth and are complemented by policy measures that foster regional cooperation and connectivity.

Since 2008, the **WBIF has allocated €1.3 bn in grants for €20.8 bn estimated investments** in well connected transport, energy and digital networks, renewable energy and energy efficiency, water supply and wastewater systems, flood protection, education, research and cultural establishments, healthcare and judicial facilities, which are crucial for sustainable development in the region.

Some of the concrete benefits of the infrastructure projects supported by WBIF entail:

- **900 km** of new roads;
- **2.3 m people** benefiting from water/wastewater systems;
- **2,800 SMEs** financed through WB EDIF;
- **90 MW electricity generation** from renewables;
- **96,000 pupils** benefiting from better schools;
- **Broadband Internet** deployment through technical assistance .

Besides physical infrastructure, these investments will reduce existing barriers making the horizon of European accession visible and obtainable.

WBIF Energy Sector. (c) WBIF

Saving energy, cutting CO₂ emissions. (c) EBRD

Thermal insulation in BiH. (c) EU

Supporting energy efficiency in Serbia. (c) EBRD

Powering clean energy in the Western Balkans. (c) EBRD

Renewable energies in the Western Balkans. (c) EU

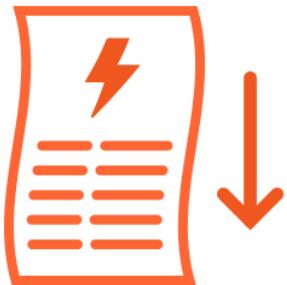
Key Impacts



€140 MILLION ON-LENT
TO FINANCE ELIGIBLE
INVESTMENTS



20,000 HOUSEHOLDS
RECEIVING FINANCE



LOWER ENERGY BILLS FOR
HOUSEHOLDS AND HOUSING
COLLECTIVES



IMPROVED ENERGY EFFICIENCY
IN THE COMMERCIAL, MUNICIPAL
AND RESIDENTIAL SECTORS



NEW BUSINESSES AND JOBS

Municipalities can now afford energy efficiency investments, with no upfront cost, as those expenses are financed through electricity savings.

Project title:

Regional Energy Efficiency Programme (REEP) for the Western Balkans

WBIF Grants:

€ 84.6 m

EBRD Loans:

€ 377 m

KfW Loans

€ 117.4 m

EBRD Grant:

€ 4.2 m

Other donors Grant:

€ 16.4 m

Total Project Value:

€ 599.6 m

