FINANCING SUSTAINABLE ENERGY: EBRD ACTION AND RESULTS
Since 2006 the EBRD has invested €16.4 billion in 926 sustainable energy projects in 34 countries.

These projects are expected to lead to annual CO₂ emissions reductions of over 70 million tonnes.

In 2014 SEI investments accounted for 34% of the EBRD’s activities.

*Regional projects are those which cover several countries and/or regions.

<table>
<thead>
<tr>
<th>Region</th>
<th>€ million</th>
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<tbody>
<tr>
<td>Central Asia</td>
<td>996</td>
</tr>
<tr>
<td>Central Europe and the Baltic states</td>
<td>2,859</td>
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<tr>
<td>Eastern Europe and the Caucasus</td>
<td>3,014</td>
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<tr>
<td>Russia</td>
<td>3,168</td>
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<tr>
<td>South-eastern Europe</td>
<td>3,111</td>
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<tr>
<td>Southern and eastern Mediterranean</td>
<td>561</td>
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<tr>
<td>Turkey</td>
<td>2,063</td>
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<tr>
<td>Regional*</td>
<td>674</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16,446</strong></td>
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It is time for action to make economies more energy efficient and reduce carbon emissions. Through its Sustainable Energy Initiative (SEI), the EBRD has developed an effective business model to scale up energy efficiency and renewable energy financing, working closely with governments and the private sector. Based on its practical experience and results, the EBRD continues to expand its major investment in energy efficiency and renewable energy with a particular focus on supporting private sector engagement.
THE CLIMATE CHANGE CHALLENGE

The climate change challenge is deepening. Despite increased awareness of its severity and the urgency of developing a response, global carbon emissions have continued to increase.

In the EBRD region of operations this challenge continues to be characterised by highly inefficient energy use. Despite improvements, energy intensity in the EBRD region remains on average over three times higher than in the European Union.

The EBRD experience to date demonstrates that the region continues to provide some of the most cost-effective carbon emission mitigation actions in the world. Energy efficiency remains a priority for all countries of operations as it reduces production costs, enhances competitiveness, supports energy security and lowers carbon emissions per unit of production.

Furthermore, several areas of the EBRD region are vulnerable to the impacts of climate change, particularly in the southern and eastern Mediterranean, Central Asia, and the Caucasus. Finding private sector-led solutions to adaptation is therefore becoming increasingly important.
ENERGY EFFICIENCY REMAINS A PRIORITY FOR ALL COUNTRIES AS IT REDUCES PRODUCTION COSTS, ENHANCES COMPETITIVENESS, SUPPORTS ENERGY SECURITY AND LOWERS CARBON EMISSIONS PER UNIT OF PRODUCTION.
The EBRD launched its Sustainable Energy Initiative (SEI) in 2006. Its objectives are to:

- Scale up its energy efficiency and renewable energy investments
- Develop financing instruments to support and leverage private sector sustainable energy investment
- Improve the business environment for energy efficiency and renewable energy investments through policy dialogue, regulatory reform and capacity-building
- Work closely with donors to develop effective measures to address key barriers to energy efficiency, with technical cooperation and investment grants
- Mainstream sustainable energy across its sectors of activity including the corporate, financial, municipal and large-scale infrastructure sectors.
The EBRD’s SEI investments were developed in three phases.

Phase 1 of the SEI, which covered the period 2006 to 2008, aimed to reach a sustainable energy investment volume of €1.5 billion for a total project value of €5 billion. By the end of Phase 1 this target had been exceeded with EBRD SEI investments reaching €2.7 billion in 166 projects for a total project value of €14 billion.

Building on these results, the EBRD set new higher objectives for Phase 2 of the SEI for the period 2009 to 2011 with a sustainable energy investment target range of €3 to €5 billion for a total project value range of €9 to €15 billion. Furthermore, reflecting the climate change mitigation objective of SEI, a specific carbon emission reduction range of 25 to 35 million tonnes CO₂ per year was also set, the first time a multilateral development bank adopted such a target.

By the end of 2011, SEI Phase 2 investments had again exceeded the upper bounds of the investment target, reaching €6.1 billion in 298 projects for a total project value of almost €33 billion with 60 per cent of the activity in the private sector, while the CO₂ reduction target had also been met. Reflecting the successful mainstreaming of the SEI across the organisation, SEI investments accounted for close to 30 per cent of the EBRD’s total investment in 2011.

Based on these strong results and its experience since 2006, the EBRD launched SEI Phase 3 for the period 2012-14. This set an SEI financing target of €4.5 to €6.5 billion and a carbon emissions reduction target of 26 to 32 million tonnes by the end of the three-year period.

Having mainstreamed the SEI into EBRD operations, the Bank is expanding its focus and has launched the Sustainable Resource Initiative (SRI).

The SRI is an umbrella initiative which promotes efficiency and innovation in three areas vital for countries where the EBRD invests: energy, water and materials. Volatile prices, the rapid growth in demand for resources, and growing environmental concerns have made resource efficiency a priority for all countries.

The SRI is the EBRD’s response to these resource challenges. It continues to finance energy efficiency, renewable energy and adaptation projects. In addition, the SRI drives water and materials efficiency through the promotion of recycling and the re-use of waste streams.

The SRI relies on the EBRD’s proven business model of combining finance with technical assistance and policy dialogue.
SEI AT A GLANCE: AREAS OF ACTIVITY

INDUSTRIAL ENERGY EFFICIENCY

Making energy efficiency investments in energy-intensive industrial processes such as steel manufacturing, aluminium smelting, cement and glass production, as well as major transport investments, such as in railway operating companies.

SUSTAINABLE ENERGY FINANCING FACILITIES

Financing facilities through local banks in countries of operations to support industrial energy efficiency in small and medium-sized enterprises (SMEs), small-scale renewable energy and building energy efficiency projects.

MUNICIPAL INFRASTRUCTURE ENERGY EFFICIENCY

Upgrading neglected municipal infrastructure to provide efficient district heating, public transport networks and water supply systems.

CARBON MARKET DEVELOPMENT

Promoting the financing of low carbon projects in the region through the use of carbon market tools. The development of this market requires the creation of new institutions, clear regulatory frameworks and a critical mass of investments.
POWER SECTOR
ENERGY EFFICIENCY

Improving the energy efficiency of transmission networks and thermal power stations which generate the majority of energy in the region. The ageing energy infrastructure includes a large number of plants with low generation efficiency, high running costs, and excessive pollution and carbon emissions.

CLIMATE CHANGE
ADAPTATION

Developing approaches to integrate climate risk management and adaptation into project appraisal and development with a particular focus on the private sector.

RENEWABLE
ENERGY

Supporting the development of renewable energy sources by providing project finance and technical cooperation to shape the institutional and regulatory frameworks for renewable energy investments.
APPROACH AND FINANCIAL INSTRUMENTS

The EBRD has developed a unique business model to finance energy efficiency and renewable energy projects, combining investment with technical assistance and policy dialogue.

The SEI uses the full range of the EBRD’s financial instruments, including:

- direct EBRD financing and syndication in the form of private, non-sovereign and sovereign guaranteed loans, direct equity, equity funds and credit lines in the context of individual energy efficiency and renewable energy projects
- co-financing with the private financial sector, public sources such as multilateral donor funds, and other international financial institutions (IFIs) as part of the project financing plan
- selective and smart use of subsidies (where necessary) to address specific barriers and market failures in line with the guidelines developed by the Bank
- carbon finance or other market-based systems which can provide additional revenues for projects. This includes technical support to EBRD clients for structuring transactions that will benefit from carbon finance or similar mechanisms
- project preparation support in the form of technical cooperation and grant co-financing to support implementation of selected SEI components
- project-related institution building and policy dialogue to support the effective development and implementation of projects in terms of policy, legal, regulatory, technical and organisational capacity in EBRD’s countries of operations.
DONOR SUPPORT

The strong support from donors for technical cooperation and investment grant funding has been a major factor in SEI results. The 20 bilateral donors and several multi-donor funds which have supported the SEI to date have made a crucial contribution to its success.

Since the implementation of the SEI in 2006, donors have contributed just over €1 billion in technical assistance, grant co-financing, concessional finance and risk-sharing instruments via bilateral and multilateral funds.

Within the current climate policy context, concessional finance has an important function to address specific market failures and to provide appropriate incentives to mitigate risk and support the uptake of new technologies, as well as to tackle affordability issues in selected countries. Through the effective combination of these contributions with its business model, the EBRD has been playing a meaningful role in mitigating climate change, as well as in addressing the negative consequences that climate change brings to its region.

MULTILATERAL DONORS

EUROPEAN UNION: BILATERALLY AS WELL AS REGIONAL FACILITIES
CLIMATE INVESTMENT FUNDS (CIF)
GLOBAL ENVIRONMENT FACILITY (GEF)
ADAPTATION FUND (AF)
SPECIAL CLIMATE CHANGE FUND (SCCF)
NORTHERN DIMENSION ENVIRONMENTAL PARTNERSHIP (NDEP)
EASTERN EUROPE ENERGY EFFICIENCY AND ENVIRONMENT PARTNERSHIP (E5P)
WESTERN BALKANS INVESTMENT FRAMEWORK (WBIF)
EBRD SHAREHOLDERS SPECIAL FUND

BILATERAL DONORS

AUSTRIA
CANADA
CZECH REPUBLIC
DENMARK
GERMANY
GREECE
ITALY
JAPAN
LUXEMBOURG
NETHERLANDS
NORWAY
SPAIN
SWEDEN
SWITZERLAND
TAIPEI CHINA
UNITED KINGDOM
UNITED STATES
Technical cooperation is a key element in achieving the full potential of EBRD sustainable energy operations by removing barriers that exist to project development and implementation. For example, it enables the EBRD to support in-depth project preparation that can help to reduce perceived risk, and alert project sponsors to technical opportunities of which they were not aware. It provides for analysis of market opportunities to expand its sustainable energy portfolio, and it provides training and skills to energy managers and loan officers in local banks.

Technical cooperation includes assignments such as energy audits, sustainable energy market assessments, training, or monitoring and evaluation.
**SEI ENERGY AND RESOURCE AUDIT PROGRAMME, 2006-14**

Energy and resource audits provide business owners with information on profitable energy and resource efficiency opportunities in industrial plants and equipment. They have proven a cost-effective method to translate potential efficiency gains into specific investments.

Since the launch of the SEI, over 380 energy audits have been performed using €13 million of technical assistance supported by 17 different donors.

The audits assisted the Bank in signing 146 new energy and resource efficiency projects amounting to over €2.8 billion of sustainable resource investments in industrial companies, power plants and the building sector.

Examples of investments resulting from energy audits include:

- **INSTALLATION OF COMBINED HEAT AND POWER UNITS**
- **INSTALLATION OF MODERN HIGH PERFORMANCE EQUIPMENT AND MACHINERY**
- **MODERNISATION OF COMPRESSOR STATIONS**
- **ENERGY MANAGEMENT TRAINING.**

These projects are estimated to result in carbon emission reductions of 14.8 million tonnes a year.

**POLICY DIALOGUE**

The EBRD engages with national policy-makers and government officials to reform legislation and regulation, based on international best practice. This improves the investment environment for project sponsors of sustainable energy projects, ranging from individual home owners to municipalities or developers of large wind farms.

Policy dialogue provides long-term benefits by reshaping the legal and regulatory environment to support low-carbon growth. Examples of SEI policy dialogue include:

- **LEGISLATION ON IMPROVING ENERGY EFFICIENCY IN PUBLIC BUILDINGS IN THE RUSSIAN FEDERATION**
- **IMPLEMENTATION OF SECONDARY LEGISLATION FOR RENEWABLE ENERGY IN KAZAKHSTAN**
- **SUPPORT TO FORMULATION OF NEW DEDICATED LAWS ON ENERGY EFFICIENCY FOR BOTH PUBLIC AND RESIDENTIAL BUILDINGS, BASED ON THE EU ENERGY EFFICIENCY CONCEPT, IN MOLDOVA AND THE KYRGYZ REPUBLIC**
- **DRAFTING OF A PLAN TO SUPPORT THE DEVELOPMENT OF ENERGY SERVICE COMPANIES IN TURKEY.**
The EBRD arranged a €125 million long-term loan to finance an energy efficiency programme of the leading Russian steelmaker Novolipetsk Steel Works (NLMK). The overall impact of NLMK’s energy efficiency programme will be to cut absolute energy consumption by an estimated 15 per cent by 2015.

Energy efficiency gains will be achieved through the introduction of cutting edge technology – such as pulverised coal injection (PCI) – which has not been widely implemented by Russian iron and steel plants to date.

The EBRD project is financing the construction of a 150-megawatt combined heat and power plant which will utilise waste gases from blast furnaces at the plant in Novolipetsk. The project will also make NLMK a benchmark for the industry and bring the company to the forefront of the country’s efforts to improve energy efficiency and combat climate change. This is particularly important as the iron and steel industry is estimated to account for close to 7 per cent of greenhouse gas emissions in Russia.
The EBRD is helping to improve energy efficiency in Bosnia and Herzegovina’s retail industry with a €5.4 million loan to implement energy saving measures in Bingo – one of the leading retail chains in the country. Bingo operates 43 supermarkets and 24 hypermarkets, with a total trading area of more than 150,000 square metres.

The EBRD loan, part of the Bank’s Western Balkans Sustainable Energy Direct Financing Facility (WeBSEDFF), will be used to install such advanced energy efficiency measures as water-to-water heat pumps, LED lighting, chillers, high performing refrigeration with heat recovery, as well as insulation panels in Bingo’s outlets. It is estimated that this project will reduce CO₂ emissions by approximately 4,700 tonnes, which is equivalent to a saving of 51 kg of CO₂ per square metre of retail space per year.

The project will transform Bingo’s retail network into a showcase of advanced sustainable energy solutions in the retail industry and will enable the company to minimise operating costs and strengthen its competitiveness.
The EBRD has provided €13.3 million for a wind farm in western Ukraine to improve power-supply reliability and reduce carbon-dioxide emissions. The loan showcases the SEI integrated approach to sustainable energy including policy dialogue, project funding and global climate finance.

The financing consists of a €9.5 million loan from the EBRD and €3.8 million loan from the Clean Technology Fund (CTF). Eco-Optima Ltd., the company implementing the project, will use the funds to build and operate a wind farm with a capacity of 12.5 megawatts, supplying power to more than 10,000 households. When the plant becomes fully operational, the expected carbon emission reductions will amount to about 26,000 tonnes a year.

This is the first project under the €70 million EBRD-led Ukraine Sustainable Energy Lending Facility, or USELF, which aims at supporting investments of up to €50 million for fostering private sector renewable energy projects in Ukraine. The EBRD contributes €50 million and €20 million comes from the CTF, with the Global Environment Facility (GEF) providing €5.7 million of technical assistance funding for project preparation and regulatory work.
The EBRD is promoting energy efficiency in Poland with a €150 million Sustainable Energy Financing Facility (PolSEFF). The Facility supports banks and leasing companies to lend sustainable energy financing to local SMEs operating in the manufacturing, services, retail, agribusiness and other sectors.

The investments include industrial energy efficiency improvements, energy efficiency and/or renewable energy measures in commercial buildings and small-scale renewable energy production. As a result, Polish companies become more energy efficient, improve their overall operational efficiency and competitiveness and cut their carbon footprint.

The EBRD PolSEFF loans are supported by a comprehensive technical assistance and grants programme, provided by the European Union, that supports banks in promoting financing for sustainable energy projects and help SMEs to identify and prioritise such projects.

PolSEFF is one of 16 Sustainable Financing Facilities (SEFF) that the EBRD has successfully launched in Armenia, Bulgaria, Georgia, Hungary, Kazakhstan, Moldova, Romania, Russia, the Slovak Republic, Turkey, Ukraine and the Western Balkans.
The EBRD is investing in changing people’s lives and environments from central Europe to Central Asia, the Western Balkans and the southern and eastern Mediterranean region. With an emphasis on working with the private sector, we invest in projects, engage in policy dialogue and provide technical advice that fosters innovation and builds sustainable and open-market economies.