

Sustainable Energy Initiative

Scaling up finance to address climate change



European Bank
for Reconstruction and Development

November 2012

Objectives

- ▶ Scale up the EBRD's sustainable energy investments.
- ▶ Improve the business environment for sustainable investments.
- ▶ Work closely with donors to develop effective measures to address key barriers with technical cooperation and investment grants

Targets (2012-14)

- ▶ EBRD SEI financing target of €4.5 billion to €6.5 billion with a target total project value range of €15 to €25 billion; and
- ▶ a target CO₂ emission reduction range of 26 to 32 million tonnes CO₂/year

The EBRD is the first International Financial Institution to set an emission reduction target.

At a glance*

Number of projects
552 in 30 countries

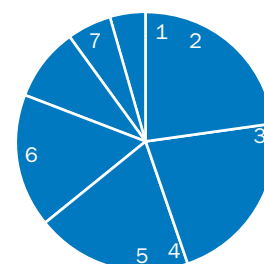
SEI investment since 2006
€10 billion

Total project value
€56 billion

Percentage of EBRD financing
21%

Expected CO₂ emission reductions per year from completed projects
50 million tonnes

SEI investments by region

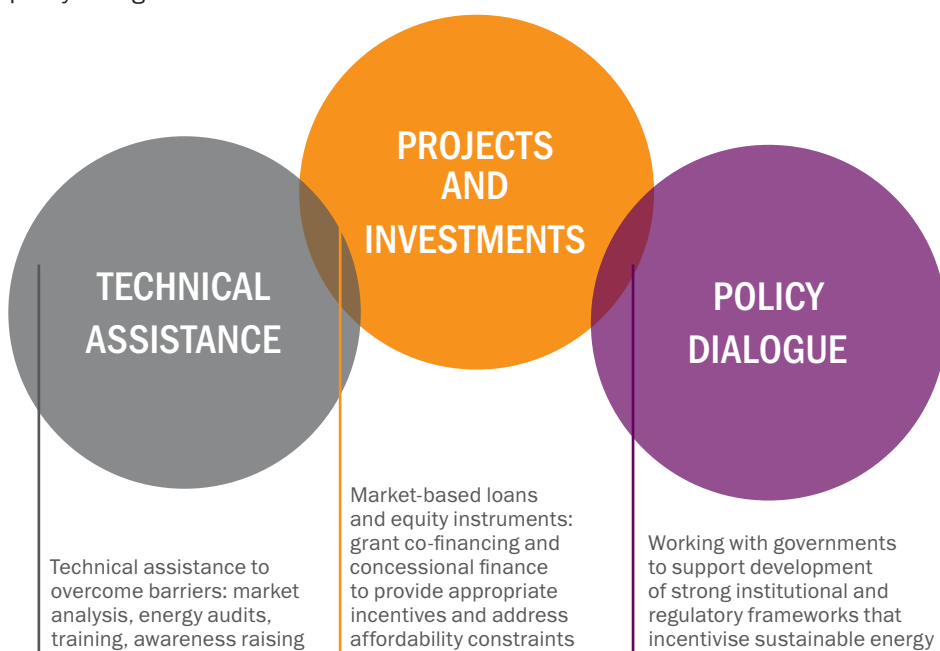


| | | |
|---|---------------------------------|-----|
| 1 | Russia | 23% |
| 2 | Eastern Europe and the Caucasus | 22% |
| 3 | South-eastern Europe | 20% |
| 4 | Central Europe and Baltics | 17% |
| 5 | Turkey | 9% |
| 6 | Central Asia | 5% |
| 7 | Regional | 4% |

*2006 – Q3 2012

Business model

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



Results

| SEI Business Areas | SEI volume (€ in million) | Number of projects |
|--|---------------------------|--------------------|
| Cleaner Energy Production | 2,625 | 60 |
| Industrial Energy Efficiency | 2,348 | 185 |
| Renewable Energy | 1,969 | 58 |
| Sustainable Energy Financing Facilities | 1,754 | 123 |
| Municipal Infrastructure Energy Efficiency | 1,318 | 126 |
| Total | 10,014 | 552 |

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SEI business model

Business areas

The SEI focuses on the following areas of business:

Industrial energy efficiency (EE):

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 (SEFF):

Financing facilities through local financial institutions to support industrial energy efficiency in small and medium-sized enterprises, small-scale renewable energy and building energy efficiency projects.

Municipal infrastructure energy efficiency (MEI):

Upgrading neglected municipal infrastructure to provide efficient district heating, public transport networks, waste management 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.

De-carbonising the power sector by:

- ▶ Power sector energy efficiency: Improving the energy efficiency of transmission networks and thermal power stations which generate most of the electricity in the region.
- ▶ Renewable energy (RE): 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.
- ▶ in Kazakhstan, EBRD policy dialogue activities successfully supported the government in the implementation of effective secondary legislation for renewable energy and supported the expected introduction of feed-in tariffs.
- ▶ in Ukraine, the EBRD was directly involved in policy dialogue that supported the government when it adopted the green-power tariff and it continues to advise the state regulator on development and

Adaptation: Developing approaches to integrate climate risk management and adaptation into project appraisal and development.

Policy dialogue

While policy frameworks for sustainable energy are improving, there are still important gaps in all countries of operations. The EBRD's experience and analysis shows that addressing these gaps is critical to achieve transformational change in the region and for scaling up sustainable energy investments. As a result, the Bank seeks dialogue with governments in the region to support them in their development of low-carbon policies across a range of sectors.

The EBRD policy dialogue activities aim to deliver benefits to governments and the private sector in order to enable investments through supporting policy/legislative/regulatory changes. This will also create knowledge and best practice approaches for replication.

Through the SEI, the EBRD has been instrumental in sustainable energy policy changes across many of the Bank's countries of operations. Examples of successful policy dialogue activities include:

implementation of related secondary legislation and procedures.

SEI donor funds

Strong support and commitments by donors are an important determinant of the SEI performance. Donor funds in the area of sustainable energy used by the Bank include: technical cooperation (TC) funding for feasibility studies and energy audits; and investment grants, where donor funds are utilised to provide an incentive to borrowers and banks to overcome specific market barriers. Investment grants as well as concessional loans have become important in certain countries and / or sectors in order to ensure uptake for investments conducive to a lower carbon economy.

From 2006 to 2008, the initial funding base was provided by bilateral donors and the European Union. The period from 2009 to 2011, has seen a steep increase in donor climate funding through the Global Environment Facility (GEF), the Climate Investment Funds (CIFs), and to a lesser degree via adaptation-targeted funds, such as the Special Climate Change Fund. Access to these funds will remain of strategic importance while ongoing discussions on long-term climate finance are still ongoing, in particular with regard to the Green Climate Fund. More recently, Asian donors have also joined the strong pro-climate donor base at the EBRD, providing significant resources, especially from Korea and Taipei China.

Leverage*

| Business area | TC impact leverage (€) | Grant impact leverage (€) |
|---------------------------|------------------------|---------------------------|
| Industrial EE | 1,077 | 22 |
| SEFF | 83 | 6.3 |
| RE | 198 | 5.9 |
| Cleaner energy production | 458 | na |
| MEI | 92 | 1.8 |
| Total SEI | 232 | 5.5 |

*Every euro spent on technical assistance and grants mobilises the above volumes of sustainable energy investments.



Co-generation plant, Lodz, Poland

SEI capacity-building activities

SEI Energy Audit Programme

Energy audits provide business owners with information on profitable energy efficiency opportunities in manufacturing, agribusiness, transport and the service industries. Energy audits have proven a cost-effective method to transform potential efficiency gains into specific investments. Since the launch of SEI, 255 energy audits, feasibility assessments, technology reviews and energy management trainings have been performed worth €9.1 million of technical assistance supported by 15 different donors. The audits resulted in 71 new energy efficiency projects amounting to over €1 billion of investments in industrial companies, food processing companies, transport operations 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
- ▶ introduction of energy management systems.

These projects are estimated to result in carbon emission reductions of 6.4 million tonnes a year.

Sustainable Energy Financing Facilities (SEFF)

The transfer of specific skills to the local market is one of the long lasting benefits of the EBRD's SEFFs. In addition to the economic and environmental benefits of the investments themselves, staff of local financial institutions become familiar with the particulars of sustainable energy investments and in which business sectors to find them; prospective borrowers learn why sustainable energy projects make good business sense and how to finance them.

Moreover, local engineers become aware of the best practice investment opportunities and where to identify them. As a result of regular exposure to international experts, this additional

capacity builds up from both formal training and on-the-job learning by doing. The project development and implementation legacy that remains will facilitate the financing of future sustainable energy investment opportunities. Currently there are 18 SEFF frameworks operating in 15 countries. So far the EBRD has provided loans to 67 local financial institutions for around €1.7 billion in investments to support over 31,500 sub-projects.

Turkey carbon market development programme

In 2011 and within the umbrella of MidSEFF (a €1 billion financing facility to scale up mid-size RE/EE investment in Turkey) the EBRD, with the support of the EU, launched a carbon market development programme aimed at supporting local banks and project sponsors in structuring carbon deals and stimulating demand for carbon credits. The programme has been divided into three levels of activities:

1. **Project level:** the Bank provides support to RE/EE project sponsors in successfully taking carbon transactions through the carbon project cycle and maximising their monetary value;
2. **Facility level:** the programme offers strategic support to the participating banks in developing carbon market services, from project structuring to stimulating credit demand, both domestically and international based on high quality carbon credits;
3. **National level:** the Bank is in continuous communication with the Turkish government to align its carbon activities with government priorities; moreover the EBRD will launch several activities (Turkish Climate Certificate; standardisation of emission reduction purchase agreement) aimed at generating demand and lowering transaction costs.

Currently, a carbon market review for Turkey has been drafted in close

collaboration with the main stakeholders and is published on www.turkishcarbonmarket.com

Policy dialogue with the governments of Moldova and the Kyrgyz Republic

Since 2009, the EBRD has supported the Kyrgyz Republic with the preparation of a new set of primary and secondary legislation on energy efficiency in buildings. Based on these efforts, the government of the Kyrgyz Republic approved two new regulations in 2012, introducing a set of instruments facilitating energy efficiency of public and private buildings. In addition, the new regulations provide procedures implementing the Law on "Energy Performance of Buildings", which was approved in 2011.

The introduction of the new regulations lays the ground for building energy efficiency in the country. To further stimulate investments in this area, the EBRD is currently launching KyrSEFF credit line with donor support from the EU. The facility with a volume of up to US\$ 20 million will consist of credit lines to local financial institutions, including microfinance institutions who will on-lend funds to private sector borrowers. Whilst KyrSEFF will focus on residential clients, it will also provide funds to business clients. Investments undertaken by residential clients will mainly comprise improvements of building envelopes and heating systems.



SEI project highlights

UKRPRODUCT

The EBRD signed a €11 million senior loan to Ukrproduct, one of the leading Ukrainian producers of dairy products. The loan was provided under the Agribusiness Sustainable Investment Facility (ASIF), a facility set up to improve energy efficiency and environmental and social performance of agricultural companies in the EBRD's countries of operations.

The investment programme targets process upgrades and energy efficiency improvements and is expected to deliver energy savings of 42,000 MWh per year which reduces energy costs by approximately €700,000 per year. Emission reductions are estimated at 9,000 tonnes of CO₂ per year which will improve the company's carbon footprint significantly. The equipment specified in the investment plan meets international best practice and goes beyond current best practices in the dairy industry in Ukraine, thereby setting the basis for Ukrproduct to improve its competitiveness.

BARES WIND FARM

The EBRD is supporting Turkey in its efforts to diversify its electricity mix. With an annual consumption growth of eight per cent since the 1980s, Turkey ranks among the fastest growing electricity markets in the world.

The EBRD is supporting the Turkish government in its efforts to meet growing electricity demand and diversifying away from expensive imported fuel sources by stimulating investment in renewable energy. In this context, the EBRD is providing a €100 million senior loan to Enerjisa, a leading Turkish energy company. Enerjisa will use the funds for the construction of a 142.5 MW onshore wind farm located in Balikesir in western Turkey. With 52 2.75 MW turbines, the wind farm will be the largest in the country. The forecast output of 210 TWh/year is equal to 0.2 per cent of total generated electricity in Turkey in 2010.



Modernised Russian railway station

RZD

The EBRD purchased €155 million worth of bonds of RZD, Russia's sole provider of public rail infrastructure and one of the main energy users in Russia. The company has identified energy efficiency as a strategic area for reducing operational costs and improving quality and reliability of services. In this context, RZD is implementing a €575 million Energy Efficiency Investment Programme and a €1.04 billion Railway Station Modernisation Programme. The EBRD is supporting RZD by providing dedicated technical assistance through energy audits under the Energy Audit Programme for the Corporate Sector. An additional technical assistance package, supported by the German government, comprises support in project management and implementation supervision, preparation of tender documents, and capacity building to support RZD in implementing energy management systems and standards. EBRD funds will be used to finance modern lighting applications and to upgrade RZD's railway stations. The direct impact of the EBRD investment is estimated at 500,000 tonnes of CO₂ per year.

TURKISH SUSTAINABLE ENERGY FINANCING FACILITY

The US\$ 285 million facility, TurSEFF, aims at supporting small-scale investments in energy efficiency and renewable energy. Under TurSEFF, which is supported by the Clean Technology Fund and the EU, long-term credit lines are provided to local financial institutions for on-lending to the private sector. The maximum loan amount is US\$ 5 million. Technical assistance is provided to both local financial institutions in the form of training and capacity building and end-user clients in the form of energy audits.

TurSEFF results up to Q3 2012:

- ▶ more than US\$ 230 million of sub-loans disbursed
- ▶ 343 projects implemented, of which
- ▶ 304 energy efficiency projects
- ▶ 39 renewable energy projects
- ▶ almost 800,000 tonnes of CO₂ emissions avoided
- ▶ energy savings are estimated at 275,900 toe.