

# Sustainable Energy Financing Facilities

## EBRD factsheet

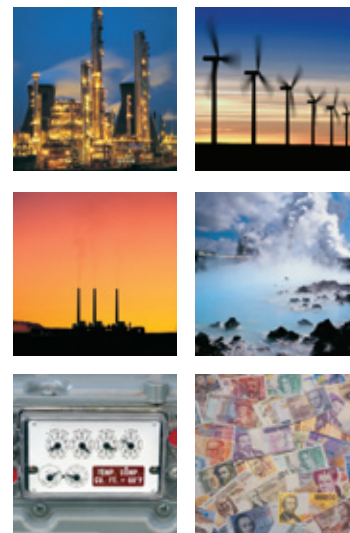


European Bank  
for Reconstruction and Development

Despite rising energy prices in the region, significant amounts of energy are being wasted (through out-dated and inefficient equipment and a lack of monitoring and control devices) and renewable energy resources are under-utilised.

The EBRD recognises the enormous need for investment in energy sustainability in its countries of operation and has developed financing facilities specifically dedicated to medium and small-scale energy efficiency and renewable energy investment projects.

By engaging the local financial sector, many of the barriers that prevent the identification and financing of sustainable energy investment opportunities can be overcome. Sustainable Energy Financing Facilities – one component of the Bank's Sustainable Energy Initiative – are being successfully implemented through 28 local banks in six countries.



## Overview

Investment in energy efficiency and renewable energy projects is often hampered by a variety of issues that prevent the best available solution from being implemented. Prospective investors tend to focus on their core business activities and usually do not have the in-house resources to identify sustainable energy investment opportunities and prepare loan applications. Local banks are highly proficient in carrying out potential borrower credit analysis, but are typically unfamiliar with appraising the technical benefits of engineering projects. The Facilities help bring together the critical technical and financial components required to facilitate and/or add value to sustainable energy investment opportunities.

Financing is based on the EBRD extending credit lines to local banks that participate in the Facilities. Each credit line is specifically dedicated for on-lending to industrial and/or residential sector borrowers, for the implementation of energy efficiency and/or renewable energy investment opportunities. The local banks use the credit line to provide commercial loans, at their own risk, to borrowers with eligible investment opportunities.

Every credit line is supported by a comprehensive technical assistance package that underpins demand for the Facility, helps potential borrowers prepare loan applications and familiarises local bank loan officers with sustainable

energy investment opportunities. This assistance is provided free-of-charge by a project implementation team consisting of international and local experts, openly recruited by the EBRD and supported by grant funding provided by Donors. Each team includes technical and financial specialists (to assist in project identification, preparation and verification), marketing talent (for branding and promoting the Facility) and project management, coordination and administration experience (to structure, operate and monitor the Facility and liaise closely with all parties involved).

As a result of the investments implemented under the Facilities, industries are more competitive, residences are more comfortable, the intensity of fossil fuel use has been reduced and significant amounts of greenhouse gas emissions have been avoided.

In addition to encouraging investment in energy sustainability, the Facilities provide added value by ensuring that local experts are competent in identifying investment opportunities and preparing loan applications, and that local financial institutions are familiar with appraising and financing these investments. This process is generating long-term local capacity and contributing to the establishment of self-supporting markets for investment in energy sustainability.

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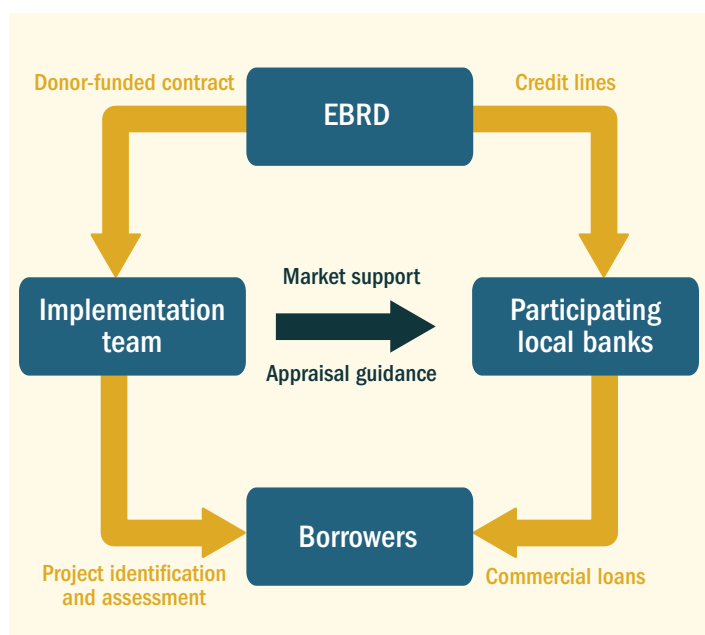
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## How the Facilities work

The EBRD lends funds to local banks that are willing to participate in a Facility and that meet standard EBRD eligibility criteria. A project implementation team, together with the local banks create awareness about the Facility and how potential borrowers can apply. The local banks assess the creditworthiness of potential borrowers that apply to the Facility. The project implementation team provides free-of-charge advice (usually based on an energy survey at the potential borrower's site) to help identify and evaluate energy efficiency and renewable energy investment opportunities. The project implementation team works together with the local banks to assess the eligibility of the potential borrowers' loan applications.

The local banks take lending decisions, which if positive, result in loans at commercial rates. Loan amounts vary depending on the Facility and the investment opportunity. Some investments may additionally be assessed by specialists for carbon credit opportunities under the Joint Implementation, Clean Development Mechanism or EU Emissions Trading Scheme.



## Eligibility

### Industrial energy efficiency

Eligible investments should aim to reduce consumption of electricity and/or other forms of energy directly related to the industrial sector.

Loan amounts typically range from a few hundred thousand euro to a few million euro.

Examples of eligible projects include:

- on-site co-generation of heat and electricity
- modernisation of steam production and distribution systems
- upgrade of compressed air production and distribution systems
- improved heat recovery from processes
- heat insulation
- load-matching variable speed motor controls
- higher efficiency lighting
- the introduction or improvement of energy management and control systems

### Renewable energy

Eligible investments should involve the purchase and installation of equipment, systems and processes utilising renewable energy resources replacing fossil fuel resources.

Loan amounts can be as high as a few million euro.

Examples of eligible projects include:

- wind turbines
- small-scale hydropower
- solar thermal heating systems for water or process heating
- biomass systems generating heat only or heat and electricity
- gas engines using biogas
- diesel engines using biodiesel
- geothermal heat pumps

### Residential

Eligible investments should consist of either collective action to improve the energy performance of a multi-apartment building or the acquisition and installation of approved equipment, appliances and materials.

Loan amounts typically range from a few thousand euro (for individual apartments) to a few hundred thousand euro (for multi-apartment buildings).

Examples of eligible projects include:

- double-glazing
- insulation of walls
- insulation of roofs
- high-efficiency biomass stoves/boilers
- solar water heaters
- high-efficiency gas boilers
- heat pumps

## Project showcase

### Bakery assess rising energy costs

A bakery, in association with its bank, requested a free-of-charge assessment of potential energy savings that could be achieved at its production facilities. A team of local and international energy efficiency experts identified a number of measures, including the cogeneration of electricity and heat and re-using oven waste heat. An investment of €1.1 million resulted in annual energy savings worth €0.4 million as well as other substantial cost savings. This investment avoids the annual production of an estimated 2,500 tonnes of CO<sub>2</sub> emissions.



### Factory sheds power bill

A paper factory sought to expand its production capacity and was in the process of requesting a loan from its bank. Fortunately, this bank had just started participating in an EBRD Sustainable Energy Financing Facility and suggested that the paper company utilise the free-of-charge energy saving advice that the Facility offered. A team of industry specialists assessed the production facility and suggested prioritising a number of energy efficiency investment opportunities. As a result, the total investment of €3.0 million allowed production capacity to double and prevented the use of more than €0.6 million worth of energy per year. This investment avoids the annual production of approximately 10,000 tonnes of CO<sub>2</sub> emissions.

### Making cosier homes

A housing association, representing 48 individual apartments, requested an assessment of the energy saving potential of their building. A team of residential energy efficiency specialists proposed a package of measures including improved control systems, thermal insulation of the building envelope, replacement windows and doors, a new gas-fired boiler and the installation of solar-thermal water heating panels. The relatively high investment cost of €330,000 allowed the Association to reduce energy costs by a dramatic two-thirds, equivalent to annual savings of almost €37,000. In addition, the building is now well-maintained, the residents experience significantly higher levels of thermal comfort and the apartments have a higher resale value. As a result of this investment, 120 tonnes of CO<sub>2</sub> emissions are avoided annually.



### Profitable exchange

A chemical processing company investigated ways to use the waste steam from a chemical production line to provide heat to the initial stage of a parallel process – sand drying for use in the production of dry building compounds. This required the construction of a sand drying installation with a steam-to-air heat exchanger to heat air to a temperature of 180C. The €316,000 investment makes use of €110,000 worth of energy per year that was previously being released to the atmosphere. Making use of the waste heat decreases the quantity of natural gas needed for sand drying and avoids annual CO<sub>2</sub> emissions of approximately 1,250 tonnes.

### Going with the flow

A company dedicated to the construction and operation of small hydro power plants applied for Facility financing for a small run-of-river 650 kW hydro power plant. The €1 million project was assessed as eligible and, on average, produces €130,000 worth of electricity per year (at current market value). In addition, this project contributes towards the national renewable energy target and is mitigating the loss of electricity generation capacity from a number of nuclear power plant units that have been shut down. If this electricity were produced from conventional sources, approximately 3,000 additional tonnes of CO<sub>2</sub> would be created per year.



### Waste not, want not

A company in possession of a small municipality heat supply concession, requested Facility financing for the construction of a biomass boiler plant using wood waste. €1.5 million of project costs were financed by the Facility and the company now provides heat worth more than €380,000 per year (at current market value) to end-users. This investment uses wood waste to replace the combustion of light fuel oil that would have produced approximately 2,500 tonnes of CO<sub>2</sub> emissions per year.

## Current Facilities

### Bulgaria: 2004-2009

Web site: [www.beerecl.com](http://www.beerecl.com)

€105 million of EBRD funding for energy efficiency and renewable energy in industry, with technical assistance being supported by the Kozloduy International Decommissioning Support Fund.

### Bulgaria: 2005-2009

Web site: [www.reecl.org](http://www.reecl.org)

€50 million of EBRD funding for residential energy efficiency, with technical assistance being supported by the Kozloduy International Decommissioning Support Fund.

### Bulgaria: 2008-2010

Web site: [www.bulgaria-eueeff.com](http://www.bulgaria-eueeff.com)

€20 million of EBRD funding for industrial energy efficiency, with technical assistance being supported by the European Commission.

### Kazakhstan: 2008-2010

Web site: Still to be launched

€50 million of EBRD funding for energy efficiency and renewable energy in industry, with technical assistance being supported by the EBRD-DFID Energy Efficiency Fund, the Norwegian Ministry of Foreign Affairs and the Japan-Europe Cooperation Fund.

### Georgia: 2007-2009

Web site: [www.energocredit.ge](http://www.energocredit.ge)

€20 million of EBRD funding for energy efficiency and renewable energy in the industrial and residential sectors, with technical assistance being supported by the Canadian International Development Agency, the Early Transition Countries Fund and the United Kingdom Sustainable Energy Initiatives Fund.

### Romania: 2008-2010

Web site [www.eeff.ro](http://www.eeff.ro)

€80 million of EBRD funding for industrial energy efficiency, with technical assistance being supported by the European Commission.

### Slovak Republic: 2007-2010

Web site: [www.slovseff.eu](http://www.slovseff.eu)

€60 million of EBRD funding for energy efficiency and renewable energy in the industrial and residential sectors, with technical assistance being supported by the Bohunice International Decommissioning Support Fund.

### Ukraine: 2006-2008

Web site: [www.ukeep.org](http://www.ukeep.org)

€100 million of EBRD funding for energy efficiency and renewable energy in industry, with technical assistance being supported by the Austrian Federal Ministry of Finance and the Swedish International Development Agency.



## Contacts

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Today the EBRD uses the tools of investment to help build market economies and democracies in countries from central Europe to central Asia.

### Exchange rates

Non-euro currencies have been converted, where appropriate, into euro on the basis of the exchange rates current on 31 December 2007. (Approximate euro exchange rates: £0.73, US\$ 1.47, ¥ 164.87.)