

# Green Economy Transition

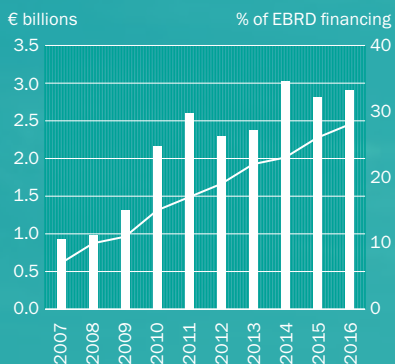


**European Bank**  
for Reconstruction and Development



# EBRD investments in the green economy

## Green finance 2006-16




## Green finance by business area



Corporate energy efficiency	27%
Green Economy Finance Facilities	17%
Cleaner energy production	23%
Renewable energy	18%
Municipal infrastructure energy efficiency	15%





## Green economy: at the core of the EBRD mandate

Preserving and improving the environment are central features of a modern, well-functioning market economy and therefore key goals of the transition process that the EBRD was set up to promote. Recognising this, the Bank launched the Green Economy Transition (GET) approach in 2015 to put investments that bring environmental benefits at the heart of the EBRD mandate.

The GET approach builds on a decade of successful climate and resource efficiency investments by the Bank. It seeks to increase the volume of green financing from an average of 25 per cent of EBRD annual business investment over the last decade to 40 per cent by 2020. The GET also targets a broader range of environmental projects while deepening the policy dialogue and partnerships needed to drive the growth of the green economy.



## A region in need of urgent action

Most EBRD countries of operations began the transition process at a significant disadvantage, owing to a legacy of widespread environmental neglect and wasteful energy use.

Those in the southern and eastern Mediterranean region are burdened with a similar background of natural-asset mismanagement, as well as severe levels of water stress.

In recent years, countries where the EBRD works have taken important steps to reduce environmental degradation, with noticeable results including improved air quality, the phase-out of ozone-depleting substances, increased use of renewable energy sources and better water management.

Despite these efforts, the EBRD region is still lagging behind; its average carbon intensity is almost 5 times higher than the EU-28 average, and the level of energy intensity is 4 times higher.

Particulate emissions in many cities far exceed levels considered safe for human health, while water pollution and other forms of damage to the natural environment remain a major problem.

Furthermore, many of these countries are particularly vulnerable to the effects of climate change such as temperature shifts, changing precipitation patterns, rising sea levels and extreme weather events. Some impacts will be widespread; for instance, scarcity of fresh water will affect everything from agriculture to human health.

The EBRD region therefore needs to act urgently to protect its people and their livelihoods from environmental hazards. Swift action is also required to close the technological gap separating these countries from those that moved early to tackle climate change and are now reaping considerable economic, environmental and social benefits.



## An opportunity for growth

While the human and economic costs of failing to tackle climate change are immense, the potential benefits of taking action are many and varied and go far beyond avoiding the harmful consequences of global warming.

Many EBRD clients are already experiencing the significant financial rewards of using energy, water and other resources more efficiently. Introducing modern, fuel-saving technology, recycling production materials and converting waste into sources of power and heating are just some of the ways businesses can free up capital for more profitable uses, such as research and development.

Reducing energy consumption and switching from hydrocarbons to renewable sources of power allows countries to rely less on expensive fuel imports and improve their energy security. Employing technology that conserves water eases pressure on a scarce resource and therefore has significant geopolitical implications

for many parts of the EBRD region. It can also increase productivity, for example in the agricultural sector.

Cleaner forms of transport and improvements in waste management enhance the attractiveness of urban centres and other locations, thereby supporting the development of the retail and tourism sectors. Adapting infrastructure and business planning to changing climatic conditions can make economies resilient to increasing water scarcity and extreme weather events and can thus ensure that countries prosper in the long run.

In addition, transitioning to a green economy affords numerous opportunities for growth. Businesses and countries that invest in new, environmentally friendly technologies and processes enjoy a competitive advantage on global markets. These investments constitute a valuable source of wealth and job creation at a time of continued economic difficulties.



# Enhancing our approach to sustainable investment

While maintaining its focus on the private sector and its tried and tested business model of combining investment with technical assistance and policy dialogue, under the GET approach the Bank is enhancing its sustainable financing activities in several ways.

## Broadening the environmental dimension

The EBRD is considering a wider range of projects that promote the sustainable use of resources and protect natural assets, including investments whose primary purpose is to prevent or remediate damage to ecosystems. Ventures aimed at rehabilitating contaminated sites or preserving ground and surface water resources are examples of such investments.

## Furthering innovation

There is considerable potential to increase the uptake of high-tech solutions and processes, such as environmental management systems, in the EBRD region.

The GET approach brings suppliers of the latest technologies and equipment into new markets, for example through technology transfer mechanisms such as the EBRD's Finance and Technology Transfer Centre for Climate Change (FINTECC).

## Enhancing the use of public delivery channels

The EBRD recognises the large scope for investments with environmental benefits in the public sector. Improving the energy efficiency of public buildings, for instance, could help to significantly reduce greenhouse gas emissions across the region. The Bank is developing a range of financing channels and capacity-building tools to support innovative public ventures, while retaining its overall emphasis on the private sector.

## Deepening policy dialogue

Working closely with local and national authorities, the EBRD supports investment plans, legislation, regulations and other policy interventions that seek to address market failures and accelerate the transition to a low-carbon economy. Under the GET approach, the EBRD is deepening its policy reform efforts to help stimulate development of the green economy.

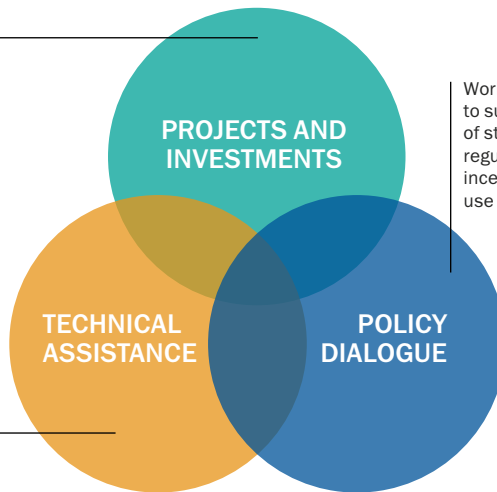


Visit the FINTECC website  
[fintecc.ebrd.com](http://fintecc.ebrd.com)

# The GET model

Projects across GET business areas

Technical assistance to overcome barriers: market analysis, resource audits, training, awareness raising; grant co-financing to provide appropriate incentives and address affordability constraints



Working with government to support development of strong institutional and regulatory frameworks that incentivise the sustainable use of resources

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

The GET approach 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 green projects
- ▶ co-financing with the private financial sector, public sources such as multilateral donor funds, and other international financial institutions 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 assistance and grant co-financing to support implementation of selected GET 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 countries of operations.

# The GET in practice

Investments under the GET approach mitigate and/or build resilience to the effects of climate change and other forms of environmental degradation. The EBRD provides direct sustainable financing to large corporate clients in sectors such as agribusiness, industry, power and energy utilities, property and tourism and transport, as well as to municipalities.

Indirect financing is extended through Green Economy Finance Facilities. These provide credit lines to local financial institutions for on-lending to small and medium-sized enterprises and homeowners. The facilities offer expert guidance to lending partners on designing the best financial products and advise borrowers on how to turn green projects into sound investments.

Supported by donor funds and policy dialogue, EBRD green investments typically involve a combination of elements from the following areas of activity.

## Energy efficiency

To help the region address energy waste and cut greenhouse gas emissions, the Bank invests in large-scale technological upgrades; these reduce the amount of energy consumed by manufacturing processes, food and beverage production and distribution, construction work and transport networks. Investments in municipal infrastructure improve the energy performance of district heating, water treatment and public transport projects. On the supply side, the EBRD supports energy efficiency enhancements for large-scale power generation, transmission and distribution ventures. Green Economy Finance Facilities fund smaller-scale improvements in the corporate and residential sectors.

## Renewable energy

The EBRD finances wind, solar, hydro, geothermal, biomass and biogas power generation projects, often acting as a pioneer investor in what remains a fledgling sector in many parts of the region. As well as helping to cut greenhouse gas emissions, these investments improve the energy security of the Bank's countries of operations. Smaller-scale renewable energy projects financed directly or through Green Economy Finance Facilities help corporate clients to reduce their energy costs and fossil fuel consumption.



Read more about our Sustainable Resources Initiative  
<http://bit.ly/22SkPJW>



### Resource efficiency

The EBRD region includes some of the most water-stressed countries in the world, such as those in the southern and eastern Mediterranean region and Central Asia. The Bank promotes the use of innovative water-saving technologies in the construction and operation of tourist resorts, shopping centres and water treatment plants and in the agribusiness sector, among others. The EBRD also uses direct and indirect financing to champion the efficient use of materials.

### Climate change adaptation

Many EBRD countries of investment are among those most vulnerable to the effects of climate change due to their location and, in some cases, to outdated infrastructure and facilities. Adaptation projects across a variety of sectors build resilience to water scarcity, extreme weather conditions, rising sea levels and other consequences of a changing climate. Donors support this work by funding climate risk assessments that help clients identify specific hazards and find technical solutions.



### Reducing pollution and protecting natural assets

EBRD projects cut pollution and protect natural assets in different ways. As well as curbing greenhouse gas emissions, renewable energy investments reduce local pollution by replacing particle-emitting fuels such as coal with wind, solar or hydro power. Resource efficiency initiatives preserve the natural environment by preventing the overuse of water and raw materials and promoting the recycling of waste products. Investments in the water and wastewater treatment sectors avoid the contamination of natural bodies of water, while cleaner forms of urban transport, such as electric trams, ensure citizens have better quality air to breathe. Modern landfill sites allow municipalities to manage solid waste in a safe and hygienic manner that has less negative impact on the local environment.



# Working with donors

Donors provide critical support to EBRD projects that mitigate or build resilience to the effects of climate change and other environmental threats. The Bank works with bilateral donors, including the EU, and multilateral climate finance partners, such as the Climate Investment Funds and the Global Environment Facility.

## Technical assistance

A key element in achieving the full potential of EBRD green investments is the provision of technical assistance to help remove barriers to project development and implementation.

This takes the form of in-depth project preparation to reduce perceived risk, highlight new technical solutions, analyse market opportunities and transfer new skills to clients. Technical assistance may also include resource audits and/or climate resilience audits which consider the impact of projected environmental changes on project

operations. These audits can include projections of water availability, sea-level rises or the increased occurrence of flooding and identify potential measures to mitigate the risks that a project faces.

## Concessional finance

Addressing specific market failures and providing suitable incentives to diminish risk and support the uptake of new technologies are key objectives of donor-funded concessional finance. The combination of concessional finance and EBRD funding has proved to be a successful approach when market barriers are high.

## Bilateral donors

Austria	Japan
Belgium	Kazakhstan
Canada	Korea
Czech Republic	Netherlands
Denmark	Norway
EBRD Shareholder Special Fund	Portugal
	Slovakia
European Union	Russian Federation
Finland	Spain
France	Sweden
Germany	Switzerland
Greece	Taipei China
Italy	United Kingdom
	United States of America

## Multilateral donors

Adaptation Fund  
Climate Investment Funds  
Eastern Europe Energy Efficiency and Environment Partnership  
Early Transition Countries Fund  
EBRD Water Fund  
Global Environment Facility  
Green Climate Fund  
MENA Transition Fund  
Northern Dimension Environmental Partnership  
Kozloduy and Bohunice Decommissioning Support Funds  
SME Local Currency Risk Sharing Fund  
Southern and Eastern Mediterranean Multi-Donor Fund  
Ukraine Stabilisation and Sustainable Growth Multi-Donor Account  
Western Balkans Investment Framework

# Landmark solar power project in Kazakhstan

The 50 MW Burnoye solar power plant is the first large-scale solar project in Kazakhstan. Located in the southern Zhambyl region, the facility aims to help redress an energy imbalance that sees 80 per cent of Kazakhstan's electricity come from coal-burning in the north of the country. The south, less rich in fossil fuels, relies on foreign imports and supplies from the north and transmission losses are equivalent to the total electricity consumption of Latvia.

If generated by conventional means, the energy Burnoye produces would emit about 60,000 tonnes of CO<sub>2</sub> annually.

The EBRD provided a 14 billion tenge (€38 million equivalent at the end of 2015) loan for the venture, which pioneers the use of a non-recourse finance structure. This is expected to open the door to more private investment in renewable energy in Kazakhstan. A €13.8 million loan from the Clean Technology Fund, a window of the Climate Investment Fund, also helps to reduce the risk associated with this new segment of the Kazakh energy market.

The project was made possible by the adoption of a new law on renewable energy generation building on extensive policy work by the EBRD.



Read the press release  
<http://bit.ly/1MbNjq>



# Increasing resource efficiency in Turkish industry

Şişecam Group, one of the world's leading glass manufacturers, is pioneering glass recycling in Turkey with support from the EBRD. A €30 million loan from the Bank helped Şişecam to expand its used glass collection and processing facilities. This allowed the company to increase the amount of crushed waste glass that it uses in its production process. Şişecam obtains the glass from thousands of bottle banks it has placed across the country and runs an awareness-raising campaign to encourage Turkish households to collect glass waste. The project aims to increase the rate of recycling to over 50 per cent in the following cities: Istanbul, Ankara, Antalya and Gaziantep.

In addition, Şişecam used the Bank financing to introduce a range of energy efficiency measures at several plants, thereby setting a standard for environmental performance in Turkey's manufacturing sector.

The overall impact of the measures and investments implemented by Şişecam with EBRD support is expected to reduce annual CO<sub>2</sub> emissions by about 100,000 tonnes.

Inspired by this project, the EBRD launched a Near-Zero Waste programme for the Turkish industrial, agribusiness and municipal sectors. By funding recycling facilities, the use of waste for fuel consumption, and technologies that reduce packaging waste, the programme seeks to help Turkey develop a more resource-efficient and competitive economy.



Read the press release  
<http://bit.ly/1fCkKF>

# Planning for a changing climate in Tajikistan

So far, the EBRD has invested US\$ 76 million (€62.5 million equivalent) in the rehabilitation of the Qairokkum hydropower plant in the Sugd region of Tajikistan. The investment will make the plant more resilient to the effects of climate change.

In the EBRD region, Tajikistan is among the countries most vulnerable to climate change. Average temperatures are rising, precipitation patterns are shifting and the country's glaciers are retreating. These changes can have significant effects on Tajikistan's hydropower sector, which accounts for 98 per cent of the country's electricity generation.

The project used an innovative approach, incorporating climate change considerations into the investment design; experts outlined projected climate change scenarios for the region. Based on these they calculated the expected inflow into the reservoir and the resulting capacity for electricity generation. This helped identify the optimal solution for modernisation of the hydropower plant.

In addition to making Qairokkum more resilient to climate change, the project will also boost generation capacity from 126 MW to 174 MW.

The project was supported by the Climate Investment Fund's Pilot Program for Climate Resilience, which provided concessional finance of US\$ 10 million and a capital expenditure grant of US\$ 11 million to improve affordability.



Watch the video

<http://bit.ly/1u2f0u8>



Read the full case study

<http://bit.ly/21tr4Gj>





# The sweet taste of energy efficiency in FYR Macedonia

Macedonian company Evropa has been making sweets since 1882. To finance work aimed at reducing the high energy costs and raw material losses of its production process, the firm obtained €970,000 in EBRD financing via Ohridska Banka under the Western Balkans Sustainable Energy Financing Facility (WeBSEFF). This €60 million facility has extended credit lines to eight partner banks in the Western Balkans for on-lending to businesses and municipalities investing in sustainable energy projects.

Technical advice provided with the loan package predicted a reduction of more than 30 per cent in Evropa's energy consumption rate. It also indicated several quality-enhancing benefits, thanks to investment in a new, high-efficiency boiler and other resource-saving measures. As a result, the company expects to save €262,000 per year, representing a payback period of 3.6 years. Its CO<sub>2</sub> emissions are due to decrease by 490 tonnes per year and water consumption will go down by 4,100 tonnes per year.



Read about some award-winning projects in the Western Balkans  
<http://bit.ly/10KCSRq>

# Lake Bizerte clean-up to boost Tunisian economy

The EBRD is supporting international efforts to clean up Lake Bizerte in northern Tunisia in order to reduce indirect pollution of the Mediterranean Sea, stimulate the local economy and improve the quality of life of nearby residents.

The Bank provided a €20 million loan and technical assistance to help expand and rehabilitate the sewerage network of the Bizerte region and upgrade three wastewater treatment plants located near the lake.

A 7-kilometre channel connects Lake Bizerte to the Mediterranean. Work to improve the quality of the lake's water will benefit two protected maritime areas in the vicinity as well as the adjacent Ichkeul National Park, which is a major stopover point for migrating birds.

The project, which is expected to deliver a boost to local tourism and aquafarming, is a priority for the Tunisian government and has received backing from the European Investment Bank, the EU Neighbourhood Investment Facility and the Global Environment Facility.



Read the press release  
<http://bit.ly/1EBGHo4>



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