Climate change and sustainable energy

We address the challenges of climate change and energy efficiency by integrating these issues into all of our operations as a core strategic component and competence of the Bank.
The EBRD's countries of operations include some of the most energy-intensive economies in the world. Despite progress over the last 20 years, the region continues to present unfulfilled opportunities to achieve substantial energy efficiency gains, particularly in the industrial, power and municipal sectors. In addition, dependence on fossil fuel imports also has implications for energy security. The region is a significant contributor to global greenhouse gas (GHG) emissions. Although the region was a major source of carbon emission reductions in the 1990s due to the impact of economic restructuring, it is now on an emissions growth path. More recently, the global economic crisis and uncertainty over international climate change policy has created complex and ongoing implications for all of these issues.

Climate change mitigation, energy efficiency, renewable energy and carbon finance are therefore central issues for the Bank. They are a major part of our current capabilities and activities, and are a core strategic consideration in our medium-term corporate planning. Today, we are one of the largest investors in energy efficiency, sustainable energy and carbon markets in central and eastern Europe and central Asia.

The focal point for these operations is our Sustainable Energy Initiative (SEI), launched in May 2006 and assisted by strong funding support from donor governments and the EBRD Shareholder Special Fund. Since 2006 we have invested €4 billion under the SEI framework through 237 projects in 27 countries with a total project value of €19 billion. The total reduction in carbon emissions achieved by these projects is estimated at 21 million tonnes per year with energy savings equivalent to over 8 million tonnes of oil per year.

Phase 1 of the SEI ended in 2008. Phase 2 of the SEI is now underway and constitutes a significant expansion in resource commitment, activities and outcomes (see Box 2 on page 27). Activities will include projects in industrial, power and municipal infrastructure energy efficiency as well as the renewable energy sector and carbon market development. Areas of new activity will include buildings energy efficiency and climate change adaptation.

For more information, see Sustainable Energy Initiative: Actions and results 2006-08, available on our web site.

www.ebrd.com/pubs
At the strategic level, our approach to sustainable energy and climate change includes integrating these issues into our sector policies and country strategies when they are reviewed and updated. This frames our work in areas such as power and energy, natural resources and infrastructure on projects where sustainable energy and GHG emissions reduction can often be a primary objective. We have a systematic process of pipeline screening to identify value-added energy efficiency and renewable energy solutions. This enables us to build these measures into many other projects where the primary focus may be different, such as corporate finance with industrial or commercial clients.

Our products and services also include credit lines to commercial banks to help micro, small and medium-sized enterprises to implement sustainable energy projects, and important investment and technical cooperation work in the carbon trading and carbon market development arena.

The Bank’s Environmental and Social Policy (see page 15) requires all of our clients to promote the reduction of project-related GHG emissions (see page 37) in a manner appropriate to the nature and scale of their project operations and impacts. When considering new projects that currently produce (or are expected to produce) significant GHG emissions (generally 100 kt CO\textsubscript{2}e per year or more), our environmental and social due diligence includes an assessment of the baseline and an estimate of the post-implementation position. This information enables the project’s carbon intensity to be compared with peers in its sector and its contribution to the Bank’s overall GHG impact to be evaluated.

Each year since 2003, we have reported publicly on the aggregated GHG impact that the year’s new project signings are predicted to make once they are fully implemented.
The EBRD has financed energy efficiency projects since its earliest days and established a dedicated energy efficiency team in 1994.

**Box 2: The EBRD’s Sustainable Energy Initiative**

The EBRD has financed energy efficiency projects since its earliest days and established a dedicated energy efficiency team in 1994. These activities were scaled up dramatically in 2006 with the launch of our Sustainable Energy Initiative (SEI) and the creation of a new Energy Efficiency and Climate Change department led directly by a member of our senior management team.

The SEI focuses and drives the Bank’s work on sustainable energy and climate change at both strategic and operational levels. Experts in our Energy Efficiency and Climate Change team work closely with sector specialists and Regional Offices to integrate SEI opportunities into the mainstream of the Bank. We provide investment and technical cooperation in six main priority areas:

- industrial energy efficiency
- energy efficiency and renewable energy credit lines
- cleaner energy in the power sector
- renewable energy
- energy efficiency in municipal infrastructure
- carbon market development.

The first phase of the SEI (2006-08) delivered strong performance. We exceeded our original cumulative investment target by nearly 80 per cent, established a specific track record of climate change mitigation action and results, and significantly expanded our long-standing work on energy efficiency. At the 2009 Annual Meeting, the Bank’s Board of Governors unanimously approved the Phase 2 of the SEI. This sets the following ambitious objectives for the Bank over the period 2009 to 2011:

- an investment target within a range of €3 billion to €5 billion and a total project value range of €9 billion to €15 billion
- a corresponding carbon reduction target range of 25 to 35 million tonnes of CO₂ equivalent per annum.

Phase 2 will significantly expand the scale and reach of our existing SEI activities. Driven by demand and by evolving global priorities, the following additional areas of activity are also being developed during Phase 2:

- energy efficiency of buildings
- stationary use of biomass
- climate change mitigation in natural resources sectors
- transport energy efficiency
- climate change adaptation.

Donor support plays a vital part in our implementation of the SEI and has been a major determinant of 2006-08 results that were markedly above initial objectives. Donor support for SEI Phase 1 led to the mobilisation of €218 million of technical cooperation and investment grants. Grant funds will continue to be important during Phase 2 due to the areas covered and the impact of the economic crisis.

www.ebrd.com/sei
Our achievements in 2009

We made key strategic and operational progress on energy efficiency and climate change in 2009.

On the strategic front, we managed the successful formulation and approval of SEI Phase 2. Energy efficiency and climate change considerations have also been a central part of our ongoing strategic planning process in preparation for the Bank’s 2010 Annual Meeting.

On the operational front, total SEI financing reached €1.3 billion in 2009, which is a 34 per cent increase on 2008 and accounts for nearly 17 per cent of the Bank’s total business volume for the year (see Table 7). The carbon reduction impact of our SEI investments in 2009 is estimated at 4 million tonnes of CO$_2$e, equivalent to the annual carbon emissions of Albania.

Our energy efficiency and climate change operations now cover 27 countries in the EBRD’s region, with a good geographical spread. In 2009 we signed our first SEI project in Turkey, the Rotor Wind Farm (see page 67).

Table 7: SEI projects signed in 2009

<table>
<thead>
<tr>
<th>Category</th>
<th>2009 (SEI Phase 2)</th>
<th>2006-08 (SEI Phase 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signed (€ million)</td>
<td>Number of projects</td>
</tr>
<tr>
<td>Industrial Energy Efficiency</td>
<td>317</td>
<td>26</td>
</tr>
<tr>
<td>Sustainable Energy Credit Lines</td>
<td>135</td>
<td>9</td>
</tr>
<tr>
<td>Cleaner Energy Production</td>
<td>577</td>
<td>11</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>125</td>
<td>5</td>
</tr>
<tr>
<td>Municipal Infrastructure Energy Efficiency</td>
<td>163</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>1,317</td>
<td>71</td>
</tr>
</tbody>
</table>
### Industrial energy efficiency

Our countries of operations include many highly energy-intensive industrial processes such as steel manufacturing, aluminium smelting, cement and glass production. Technological advances and fuel and electricity prices mean there is both the potential and the demand for energy savings.

We signed 26 projects in 2009 that included industrial energy efficiency components, in sectors ranging from agribusiness to transport. For example, our €120 million senior loan to Garadagh (the largest cement producer in Azerbaijan) to replace wet cement production technology with dry technology is expected to reduce energy consumption by about 50 per cent. In the transport sector, we are providing a €100 million loan to Serbia Railways for the replacement of an ageing passenger fleet for use on the country’s main intercity services, with projected annual emissions reductions of 130,000 tCO$_2$e (see page 73).

In many cases, industrial energy efficiency projects begin with energy audits provided to the client by the Bank. We launched a new €3.5 million technical cooperation facility in 2009 – the Regional Energy Efficiency Programme for the Corporate Sector – to provide energy audit support for the manufacturing, agribusiness and natural resource sectors. This programme is funded by the EU Neighbourhood Investment Facility, the Western Balkans Fund, the ETC Fund, EBRD Shareholder Special Fund, the Netherlands, Greece, Germany and Italy.

### Box 3: Energy Efficiency Management Systems

The EBRD initiated a new programme in 2009 to support companies implementing integrated Energy Efficiency Management Systems (EEMS). The programme will co-finance up to 50 per cent of the purchase of equipment/instrumentation and the cost of installation related to EEMS in selected sectors.

The beneficiaries of the programme will be some 10-15 companies in selected countries of operations in sectors such as food processing, commercial building and heat supply systems, where the introduction of EEMS can maximise the demonstration effect and catalyse the development of new markets for providers of energy-efficient technologies.
Our €43 million to CAEPCo (Northern Lights) – the largest private power company in Kazakhstan – will help the company to achieve annual emissions savings of 1.2 million tonnes of CO₂.

**Sustainable energy finance facilities**
Sustainable energy financing facilities (SEFFs) with local financial institutions are specifically dedicated to small and medium-scale energy efficiency and renewable energy investment projects.

Financing is based on 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 borrowers for the implementation of energy efficiency and renewable energy investment opportunities. The local banks use the credit lines 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 to prepare loan applications and familiarises local bank officers with sustainable energy investment opportunities and credit appraisal methods. Supported by grant funding from our donors, this assistance is provided free of charge by project implementation teams consisting of both local and international experts.

The project implementation team works together with the local banks to assess the eligibility of loan applications from potential borrowers. The local banks take lending decisions and the resulting loans are provided at commercial rates.

Loan amounts vary depending on the facility and the investment opportunity, but the average is roughly €500,000 for loans to companies while loans to households are typically below €1,500.

We signed nine transactions under the SEFF model in 2009, for a total of €135 million in Bosnia and Herzegovina, Bulgaria, Hungary, Kazakhstan, Russia, Serbia and Ukraine.
Cleaner energy production

Thermal power stations generate the majority of energy in the region, but ageing infrastructure can mean high running costs and excessive pollution and GHG emissions. The Bank supports cleaner energy production through its investment in the natural resources and power and energy sectors.

We signed 11 cleaner energy projects in 2009, including loans for Turceni and Petrom in Romania, Northern Lights (CAEPCo) in Kazakhstan, and Irkutsk Oil and Gas Company, OGK-5, TGK-13 and TGK-8 in Russia. Further information is provided on pages 61 and 68.

Technical cooperation in support of this work included preparation of a new energy audit framework for the power sector, and workshops on rehabilitation and efficiency improvement of thermal power plants in Kazakhstan and Russia.

Renewable energy

Renewable energy has developed slowly in the transition region, partly due to weak institutional and regulatory frameworks. The Bank is addressing this challenge under the SEI through a combination of investment, technical cooperation and policy dialogue.

We signed three wind power and one biomass renewable energy projects with power and energy sector clients in 2009 (see page 65), with total EBRD financing of over €133 million. In addition, we financed a further 18 renewable energy projects through our SEFF credit lines with local banks, with a total loan value of €18.2 million. These projects – mainly biomass boilers and small-scale hydro and wind power – are equivalent to a total installed capacity of 25 MWe.

Complementary technical assistance projects included an analysis of market barriers to small-scale renewable projects in Bulgaria.

Municipal and environmental infrastructure

Upgrading neglected municipal infrastructure to provide clean water supplies, efficient district heating and reliable transport networks is central to the Bank’s mission.

Twenty SEI projects were signed in 2009, including nine projects in urban and public transport, three district heating projects and five projects in wastewater and water rehabilitation (see page 55). These activities were supported with energy audits and a project-related carbon credit deal involving the Multilateral Carbon Credit Fund (MCCF, see below). Other technical cooperation work included the preparation of a carbon finance methodology for urban transport.
Carbon finance and carbon market development

The EBRD promotes and facilitates the development of the carbon market in its countries of operations through carbon fund management, technical assistance for projects to qualify under the Clean Development Mechanism (CDM) and Joint Implementation (JI) and policy dialogue to enable operational regulations for carbon credit generation and transfers. A key activity is the management of two carbon funds, the €23 million Netherlands Emissions Reduction Cooperation Fund (NERCoF) and the €208.5 million Multilateral Carbon Credit Fund (MCCF).

The MCCF is jointly managed with the European Investment Bank (EIB) and purchases carbon credits for six sovereign and five private participants. Using the MCCF, the EBRD is also active in the development of Green Investment Schemes (GIS), whereby an eligible country of operations sells surplus Assigned Amount Units (AAUs) to a buyer and the proceeds are used to co-finance greenhouse gas emission reduction projects (see box on page 33).

Our carbon finance activities increased in 2009 with the signing of five carbon credit transactions, bringing the aggregated carbon credit portfolio under MCCF and NERCoF to 10.1 million carbon credits. The carbon credits originate from emission reduction projects in the power sector, renewables, oil and gas and industrial energy efficiency and are located in Azerbaijan, Armenia, Georgia, Russia and Ukraine.

The first delivery of carbon credits under the MCCF took place from Ukrexim’s IF Cement project in 2009, and three projects completed formal registration with the UN regulating authority to date: the Sreden Iskar Cascade HPP Portfolio Project in Bulgaria, Jradzor Small Hydroelectric CDM project in Armenia and Ukrexim/IF Cement in Ukraine. Each of these are among the first registered projects in the respective countries.

In 2010 the MCCF expects to sign a number of additional carbon credit transactions. The focus will be on Ukraine and Russia.

In addition, on behalf of Spain, the MCCF facilitated Poland’s first sale of AAUs linked to a GIS, which was signed in November 2009. The €25 million deal has lead to interest in new GIS in Central Europe, Ukraine and Russia. Spain increased its commitment to GIS with an additional €18.5 million for which a new GIS transaction will be sought in 2010.
Box 4: Green Investment Schemes

Article 17 of the Kyoto Protocol allows Annex B countries (which include many of our countries of operations) to trade in AAUs in order to comply with their emission reduction targets. Most countries in central and eastern Europe are anticipated to have a surplus of AAUs by the end of the first Kyoto commitment period (2008-12), due to economic contraction and economic restructuring since the early 1990s which resulted in much lower GHG emissions than the emission caps agreed in the Kyoto Protocol. Countries that are expected to exceed their emission reduction or limitation target are potential buyers of AAUs. However, many buyers and sellers find it unacceptable to spend tax monies on purchasing AAUs without some form of conditionality on the use of the AAU sale proceeds by the seller.

Using the Green Investment Scheme (GIS) concept, we facilitate a solution to this challenge by ensuring that proceeds are used to co-finance GHG emission reduction projects such as improvements to energy efficiency and renewable energy. Through the MCCF we concluded a GIS transaction in Poland, and are exploring similar GIS development opportunities with other countries of operations, such as Bulgaria, Russia and Ukraine.

In the case of Ukraine the Bank provides specific technical assistance, funded by Spain, to develop a suitable GIS. During 2009 emphasis was put on developing tools such as the Green Investment Scheme Manual and Model Agreement, development of which was funded by the Netherlands. The GIS model agreement was well received by market parties such as the International Emissions Trading Association (IETA).

**Poland’s first GIS agreed with Spain**

We played a key role in the November 2009 agreement between Poland and Spain on a €25 million emissions trading contract, the first transaction of this kind for Poland under the Kyoto Protocol. Ministers from Poland and Spain, along with representatives of the EBRD and EIB were present for the signing of the agreement facilitated by the MCCF. The transaction will allow significant GHG reductions through the associated GIS.

This contract helps Spain to meet its obligations under the Kyoto Protocol and provides grant finance to projects that reduce greenhouse gas emissions in Poland. The GIS enables Poland to invest proceeds from the sale of carbon credits in greenhouse gas mitigation activities. This includes grants to projects including biomass, biogas electricity and heat production and expansion of the electricity transmission network to make better use of renewable energy sources.

The greening programme will be managed by Poland’s National Environmental Fund. The EBRD and EIB will support projects by providing additional co-financing and are expected to leverage up to €75 million. The total investment is expected to exceed €100 million and significantly enhance effective climate change mitigation activities in Poland.

**Amount of an emissions trading contract between Poland and Spain**

€ million

25
We increased our policy dialogue activities in 2009 with a view to creating a better enabling environment for the SEI and to improving relationships with key stakeholders.

Policy dialogue is an essential element in ensuring that the projects and strategy implemented through the SEI will have a lasting impact in supporting the transition of our countries of operations. As an instrument of change, it can deliver a transformational impact that is bigger than the sum of the impact from individual projects. Policy dialogue can be used to support top-down policy-making, implementing policies to create an environment in which the Bank can generate projects, and in bottom-up evidence-based policy-making, where experience from projects is fed back to governments and the investor community to help remove real barriers. It is also flexible in where it is targeted, and able to address any level of government or sector of the economy with relevant solutions.

We signed a Strategic Energy Action Plan (SEAP) with Bulgaria in March 2009, Ukraine in June 2009, and Russia in December 2009. These connect high priority areas for reducing energy intensity in those countries with EBRD banking operations. For example, under the Ukraine Carbon Market Facilitation Programme, the EBRD and the National Environmental Investment Agency of Ukraine are developing the legal and regulatory basis for GIS contracts.

Furthermore, in Russia, we signed a Memorandum of Understanding with Sberbank for cooperation on energy efficiency and carbon finance in Russia. This will support activities under the Russia Sustainable Energy Finance Facility and paves the way for co-financing and carbon finance.

**CLIMATE INVESTMENT FUNDS**

The Climate Investment Funds (CIF) are a pair of new multi-donor financing instruments designed to support low-carbon and climate-resilient development through the framework of the world’s MDBs. We have been actively and fully engaged with donors, the World Bank Group and other MDBs during the design and implementation of the CIFs, and are preparing substantial investment projects for implementation with CIF concessional funding. The first EBRD project benefiting from CIF will be implemented in Turkey during 2010.
As the actual impact of global warming becomes more apparent, adaptation is becoming an important part of the climate change agenda, and some of our countries of operations are likely to be affected by adaptation issues.

Like many other IFIs, the challenge is to find ways to integrate climate change adaptation into the mainstream of our operations and to innovate in the face of its impacts in our region.

We are taking a specific approach to adaptation, including improved knowledge of these issues in our region (particularly in the more vulnerable parts of our region such as south-eastern Europe, the Caucasus and Central Asia) and examining their implications in relation to our transition mandate and private sector focus.

We are examining how climate change risk management could be embedded into project appraisal, including environmental and social due diligence. This may include developing an approach for planning new and retrofitted infrastructure and other fixed assets to take account of climate risk, including a review of codes and design standards. It may also encompass infrastructure and fixed assets in vulnerable areas, such as coastal zones subject to sea level rise or in areas suffering from water scarcity. In 2009 we engaged expert consultants to develop a series of adaptation case studies based on relevant Bank-financed projects. The results will be used to inform a careful assessment of risk management techniques and options that may be appropriate for the Bank to consider.

Some of our existing investment operations already contribute to adaptation responses in areas such as water infrastructure and water management, housing stock, power and energy, transport infrastructure, agriculture and agribusiness. Examples include the St Petersburg Flood Protection Barrier, due for completion in 2010 (see page 36). Phase 2 of the SEI foresees the possibility of developing a more focused and systematic approach to addressing the climate change adaptation in the Bank’s operations.

CLIMATE CHANGE ADAPTATION
CHALLENGES IN OUR REGION

- The EBRD’s region of operations faces a substantial threat from climate change, with a number of the most serious risks already in evidence. Socio-economic factors and legacy issues will dominate vulnerability to climate change over the next 10-20 years.

- Even countries and sectors expected to benefit from climate change (such as agriculture in temperate zones) are currently poorly positioned to do so.

- The next decade offers a critical window of opportunity for countries in the region to make their development more resilient to climate change.

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St Petersburg adapts to climate change

Built on the flood plain of the River Neva at the extreme eastern end of the Gulf of Finland, St Petersburg has been flooded more than 300 times in its 306-year history and has had to endure a notable increase in the frequency of flooding in recent years. However, after nearly 30 years of on-and-off construction, a state-of-the-art flood protection barrier that constitutes one of the largest civil construction projects in the world is due to be completed by the end of 2010.

A giant fortress, at 25 kilometres in length, the barrier cuts across the Gulf of Finland and Kotlin Island in the middle. It consists of 11 embankment dams and six sluice gates to allow water to flow through the barrier and prevent stagnation in the bay. It has two navigation openings for St Petersburg's busy port traffic. A recent climate change adaptation analysis conducted by external consultants Sinclair Knight Merz (SKM) and Acclimatise, confirmed that the barrier should withstand even the worst-case scenarios for climate change and sea level rise.

The total cost of the project is estimated at 87 billion roubles, equivalent to about €2 billion. In 2002 the EBRD signed a loan agreement of US$ 245 million (€170 million) with Russia, the largest ever EBRD loan at the time, to finance the construction of the flood protection barrier. Donors such as Japan, the Netherlands, Taipei China, the United Kingdom, the United States, the European Commission and the Northern Dimension Environmental Partnership (NDEP) contributed nearly €3.5 million in grants to fund project preparation and implementation consultancies. The EIB and the Nordic Investment Bank are also financing the project.
Greenhouse gas assessment 2009

The EBRD assesses the change in annual greenhouse gas (GHG) emissions that each year’s new investment portfolio signings are predicted to make once the projects are fully implemented. This approach is well aligned with the Bank’s transition mandate and provides a good indicator of the way in which the Bank’s investment strategies are responding to the challenge of climate change in a region characterised historically by high emissions and a poor record in energy efficiency.

Projects that, by virtue of their nature or scale, are screened at the outset as likely to be significant GHG emitters or GHG savers are subject to detailed assessment. While the Bank’s Environmental and Social Policy mandates annual GHG assessment for all projects associated with facilities emitting more than 100 kilotonnes of CO₂ equivalent per annum, a lower threshold (20 kilotonnes of CO₂e) has historically been used for the portfolio assessment, even though the smaller projects make only a very minor contribution to the aggregate portfolio emissions.

This assessment combines both Sustainable Energy Initiative (SEI) projects, which result in significant GHG savings and other greenfield projects and capacity expansions, which typically lead to net emission increases. In recent years, the combination of the two has resulted in overall carbon neutrality, or better, in EBRD’s annual project portfolio. For more information on how the EBRD is addressing climate change and GHG emissions through the SEI, see page 33.

2009 results
A total of 21 projects signed in 2009 are expected to result either in significant CO₂ reductions, or in emissions in excess of 20 kt pa. These project were subject to more detailed GHG assessments.

- Six are greenfield projects or capacity increases that are expected to lead to new emissions totalling 3.6 Mtpa of CO₂e.
- Thirteen are SEI projects that are expected to lead to net savings totalling 3.9 Mtpa of CO₂e.
- Two projects are expected to result in no net change in emissions, but to involve significant efficiency improvements.

Overall, EBRD investments in 2009 will result in a net reduction in emissions of around 0.3 Mtpa of CO₂e.

Table 8: GHG impact of Bank-financed projects signed in 2009 which are subject to GHG assessment

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of projects</th>
<th>Aggregate change in CO₂e Mtpa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brownfield CCGT power plant</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>New/expanded cement production facilities</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Power plant modernisation/energy efficiency refurbishment projects</td>
<td>7</td>
<td>-2.8</td>
</tr>
<tr>
<td>Renewable energy generation projects</td>
<td>3</td>
<td>-0.5</td>
</tr>
<tr>
<td>Renewable energy/energy efficiency credit lines (aggregated)</td>
<td>1</td>
<td>-0.5</td>
</tr>
<tr>
<td>Other projects</td>
<td>7</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>-0.3</strong></td>
</tr>
</tbody>
</table>
Interpreting the assessment

The assessment is dominated by three GHG-emitting projects in the power and cement sectors and seven power sector modernisation/energy efficiency projects resulting in significant savings. Three renewable energy generation projects and seven miscellaneous small projects complete the assessed portfolio, shown in Table 8. As in 2008, the aggregated projected savings from this year’s signed sub-projects in dedicated energy efficiency and renewable energy credit lines have also been included as a separate item. The largest project, a new 860 MW gas-fired CCGT power station, is not associated with any specific closures of existing plants. However, it is fully aligned with the Bank’s country and sector policies in that it introduces into the under-invested, low efficiency and environmentally challenged Romanian power sector a state-of-the-art, economical and reliable facility with a CO\textsubscript{2} intensity far below that of the existing thermal power plant fleet.

For each project assessed, change in emissions is defined as the difference between a pre-investment baseline and a post-investment operational scenario. It is generally difficult to define these with precision, particularly in a time of rapidly changing global economic health, so the assessments must be regarded as indicative rather than precise. However, the Bank is careful not to overstate the savings or understate increases in emissions and the results therefore represent a conservative, rather than an optimistic, view of the benefits of project implementation.

Where investment improves the energy efficiency of a facility, resulting in a reduction in emissions per unit of output, the facility is likely to become more competitive and increase its output. Depending on the relative scale of these two effects, this may lead to an increase in the total emissions from the facility. Unless an offsetting reduction in emissions through the displacement of production elsewhere is clearly associated with the project, this increase is recorded as such in the annual assessment. This is despite the obvious benefit of improved production efficiency and the strong likelihood that market forces will lead to such displacement somewhere, sooner or later, even if this is not precisely identifiable at the time. Similarly, unless there is a linked plant closure, all new-build investments are regarded as contributing new emissions, even though they are likely to displace old, inefficient production somewhere in the sector in which they operate.
Overall conclusions, 2003-09
Summary results from the EBRD’s GHG emissions assessment have been published since 2003 and are shown in Table 9 below. While some individual year’s assessments have been dominated by one or two large emitting or emissions-saving projects, the 2009 result is similar to those of several previous assessments in which new emissions have been closely matched by emissions savings, leaving only a small net change. Bearing in mind the conservative nature of the assessment methodology, as described above, it is evident from the annual assessments undertaken that the EBRD is able to facilitate significant transition across its region while also achieving a reduction in net CO$_2$ emissions through investments in energy efficiency. This represents a significant break from the traditional link between economic growth and increased carbon emissions.

Table 9: GHG assessment results 2003-09

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG impact of Bank-financed projects signed in each financial year (MtCO$_2$e per annum)</td>
<td>-0.3</td>
<td>-8.0</td>
<td>-0.2</td>
<td>-4.5</td>
<td>+5.6</td>
<td>+4.0</td>
<td>+1.6</td>
</tr>
</tbody>
</table>

Integrating GHG assessment into project appraisal
Following the introduction of the Bank’s current Environmental and Social Policy in November 2008, project screening for GHG assessment now takes place at the earliest practical stage of project development – concept review. This enables GHG assessment to be fully integrated into project appraisal and enhances opportunities to incorporate GHG emission reductions into the project.

Cooperation with other MFIs
In July 2008 the EBRD hosted the inaugural meeting of the Multilateral Financial Institutions (MFI) Greenhouse Gas Footprinting Working Group. The Working Group, including representatives from the leading international development banks and export credit agencies, was established to explore the extent to which the multilateral financial institutions (MFIs) could harmonise their approaches to GHG accounting. Subsequent meetings in 2009 have been hosted by the European Investment Bank (EIB) and the International Finance Corporation (IFC). This work has helped to identify both the factors that have led to the variety of approaches adopted among the MFIs and the technical challenges common to all of them in evaluating portfolio GHG footprints. The next meeting is due to be held at EBRD Headquarters in April 2010.