



The World Bank

GREEN BOND

Background

“Climate change is a development, economic, and investment challenge. It offers an opportunity for economic and social transformation that can lead to an inclusive and sustainable globalization. That is why addressing climate change is a critical pillar of the development agenda.”

— Robert B. Zoellick, The World Bank Group President, at the United Nations Climate Change Conference in Bali, Indonesia (December 2007)

Climate change affects all of us, but will hit developing countries the hardest. Its effects — higher temperatures, changes in precipitation patterns, rising sea levels, and more frequent weather-related disasters — pose serious risks for agriculture, food, and water supplies. However, climate change is clearly not just an environmental issue. At stake are recent gains in the fight against poverty, hunger and disease, and the lives and livelihoods of billions of people in developing countries. Climate change directly impacts the World Bank’s mission of poverty reduction, and makes it difficult to achieve many of the United Nations Millennium Development Goals, such as poverty eradication, child mortality, combating malaria and other diseases, and environmental sustainability.

The World Bank is committed to supporting a global solution to climate change while tailoring our approach to the differing needs of our developing country partners. Our approach to action includes both mitigation — actions now to lower carbon emissions and avoid the unmanageable — and adaptation — actions over time to manage societies’ ability to cope with the unavoidable.

“We are working hard to ensure that developing countries continue to receive maximum levels of resources to reduce poverty and increase their economic growth to achieve the Millennium Development Goals, as well as to generate the additional financial resources they will need to adapt to climate change. We can’t let climate change turn back the clock of progress for these countries.”

— Warren Evans, Director of Environment at the World Bank



The World Bank GREEN BOND

In 2008, the World Bank launched its strategy around development and climate change to help stimulate and coordinate public and private sector activity to combat climate change. **The World Bank Green Bond** is an example of the kind of innovation the World Bank is trying to encourage within this framework. The urgency of the climate change issue and investors' interest in environmental, social, and governance (ESG) issues is supporting the growth of a "climate" asset class to which institutional and individual investors are increasing allocations.

The World Bank has been designing investment products that raise awareness for and support financing climate change mitigation and adaptation for several years. The focus is on products for investors' fixed income allocation.

In November 2008, the World Bank Green Bond was developed in close collaboration with Skandinaviska Enskilda Banken (SEB) to respond to specific investor demand for a triple-A rated fixed income product that supports projects addressing the climate challenge. Approximately USD 665 million have been invested in World Bank Green Bonds and allocated to support eligible projects.

World Bank Green Bonds support projects selected by World Bank environment specialists that meet specific criteria for development activities that help lower global carbon emissions. A key feature of these bonds is the due diligence process that the World Bank conducts to identify and monitor "green" development projects.

Examples of the types of mitigation projects supported by World Bank Green Bonds are the following:

- *Rehabilitation of power plants and transmission facilities to reduce greenhouse gas emissions*
- *Solar and wind installations*
- *Funding for new technologies that result in significant reductions in GHG emissions*
- *Greater efficiency in transportation, including fuel switching and mass transport*
- *Waste management (methane emissions) and construction of energy-efficient buildings*
- *Carbon reduction through reforestation and avoided deforestation*

Examples of the types of adaptation projects supported by World Bank Green Bonds are the following:

- *Protection against flooding (including reforestation and watershed management)*
- *Food security improvement and stress-resilient agricultural systems (which will slow down deforestation)*
- *Sustainable forest management and avoided deforestation*

Selecting the eligible types of climate change mitigation and adaptation activities was part of the product development. The World Bank's environmental, energy, and climate change experts recommended key criteria that would support low-carbon development. SEB agreed that projects that met these criteria would be of interest to their investors. In addition, the criteria underwent an independent third party scientific review by the Center for International Climate and Environmental Research at the University of Oslo (CICERO). "Overall, we conclude that the criteria combined with the proposed governance structure from the World Bank provides a sound basis for selecting climate-friendly projects," stated CICERO. With their investor clients in mind, Oekom research, a rating agency for sustainable investments that is based in Munich, Germany, also analyzed the product and are supportive of the World Bank Green Bonds as an investment product.

The World Bank Green Bonds have demonstrated that capital markets can be a source of funding for climate-related initiatives. Although funds generated from World Bank Green Bonds so far are small relative to the estimated amounts needed to fill the climate change funding gap, they are a first step and a model to mobilize private sector financing from large institutional and retail investors for climate change solutions.



Projects

Types of projects that have been supported by the World Bank Green Bonds include the following:

- Helping to install new energy efficient and solar thermal technologies in public buildings in Montenegro (see below)
- Scaling up renewable energy systems in Argentina (see below)
- Energy efficiency investments in China that reduce the energy consumed and associated greenhouse gas emissions in medium- and large-sized industrial enterprises and in central heating and gas services for municipalities (see below)
- Alternative energy in rural areas of China through methane capture and other biogas technologies associated with rural farm production
- An integrated climate change approach that supports renewable energy and energy efficiency, reforestation and sustainable forest management, and soil carbon conservation in Mexico



Energy Efficiency in Montenegro

Montenegro imports about one-third of its power to feed its fast growing energy demands and to make-up for diminishing power production due to old structures and limited investments. The government of Montenegro recognizes that additional capacity and greater energy efficiency is badly needed to meet the growing energy demand. Additionally, when national governments make energy efficiency investments in the public sector, local governments become more willing to implement their own energy efficiency programs. The **Montenegro Energy Efficiency Project** is designed to improve energy efficiency performance in public sector buildings, such as schools and clinics. The investments finance energy efficiency measures, such as retrofitting to improve heating systems and insulation as well as related heating substations and transmission networks. The project demonstrates practical solutions for efficiency upgrades within the public sector. The project also complements the activities of other donors, such as the governments of Norway and Italy, KfW, GTZ, European Commission, and UNDP, while providing financing for energy efficiency improvements in a sector that has difficulty securing such financing.



Expanding Renewable Energy in Argentina's Rural Market

The government of Argentina has made great advances in the development of a competitive and efficient electricity market. The successful **Renewable Energy in Rural Markets Project** provided access to electricity to 8,000 homes and 1,900 schools using primarily solar and wind energy technologies. The project's goal is to develop a sustainable electricity market in dispersed rural areas served and financed by private companies using renewable resources and environmentally clean technologies. The challenge was to design a scheme that provides power to poor communities at a price they can afford. Additional financing is being provided to scale up this innovative program so that more rural communities will receive reliable electricity using renewable energy technologies. The government of Argentina requested a loan to support the installation of approximately 15,500 solar home systems, and 630 solar photovoltaic systems for rural schools and public services.



China Energy Efficiency Financing

China recognizes the urgency to adopt manufacturing standards with cleaner technologies. Working with the World Bank, the government of China concluded that an initial investment is essential to promote energy efficiency in the industrial sector. The initiative includes: (1) Financing projects in medium- and large-sized manufacturing companies to serve as examples of different energy conservation options; (2) Investment lending over a period of five years with corresponding equity investment from beneficiary enterprises; and (3) Strengthening government capacity to implement industrial energy efficiency policies and programs for future greenhouse gas emission reduction goals.

Issuer

The issuer of World Bank Green Bonds is the International Bank for Reconstruction and Development (IBRD) – rated Aaa/AAA and known in the capital markets as the World Bank. The World Bank is a global development cooperative owned by 186 member countries. Its purpose is to help its members achieve equitable and sustainable economic growth in their national economies and find effective solutions to pressing regional and global problems in economic development and environmental sustainability. The goal is to help overcome poverty and improve standards of living for people worldwide.

IBRD is the oldest and largest institution of the World Bank Group and provides funding, risk management tools, and credit enhancement to sovereigns. To fund this activity, IBRD has been issuing World Bank bonds in the international capital markets for over 60 years. World Bank bonds are issued as liquid benchmark bonds, plain vanilla, local currency bonds, and structured notes.

Investors

The World Bank develops products that meet investors' specific demand. Many investors are concerned with the effects of climate change and, with their investments, they want to specifically make a difference by supporting climate change related projects. The urgency of this issue has led to the emergence of a climate asset class to which institutional and retail investors are increasing allocations.

For investors, World Bank Green Bonds are an opportunity to invest in climate solutions through a triple-A rated fixed income product. The credit quality of the World Bank Green Bonds is the same as for any other World Bank bonds. Repayment of the bond is not linked to the credit or performance of the projects, and investors do not assume the specific project risk. Investors benefit from the AAA/Aaa credit strength of the World Bank.

Issuances to Date

Summary of First USD-Denominated Green Bond Terms

Issuer	International Bank for Reconstruction and Development (IBRD)
Rating	Aaa/AAA
Total Amount	USD 300 million
Investor	State of California Treasurer's Office
Settlement Date	April 24, 2009
Maturity Date	April 24, 2012
Coupon	Floating Rate
Lead Manager	SEB

Summary of Inaugural Green Bond Terms

Issuer	International Bank for Reconstruction and Development (IBRD)		
Rating	Aaa/AAA		
Tranches	Tranche 1	Tranche 2	Tranche 3
Launch Date	Nov. 6, 2008	Nov. 14, 2008	Feb. 6, 2009
Amount	SEK 2.325 billion	SEK 375 million	SEK 150 million
Settlement Date	Nov. 12, 2008	Nov. 24, 2008	Feb. 13, 2009
Aggregate Amount	SEK 2.85 billion		
Maturity Date	November 12, 2014		
Coupon	3.5% (per annum)		
Lead Manager	SEB		
Syndicate	Credit Suisse International – <i>senior co-lead manager</i> Landesbank Baden-Württemberg – <i>co-lead manager</i>		
Investors	AP2 (Second Swedish National Pension Fund) AP3 (Third Swedish National Pension Fund) Länsförsäkrings Bank & Försäkring MISTRA Skandia Life The United Nations Joint Staff Pension Fund Others		

Links to information on the World Bank web site:

<http://www.worldbank.org/climatechange>

<http://go.worldbank.org/LFS55Z7LL0>

<http://treasury.worldbank.org/newsinvestors>