

# Annex 1: Institutional Support for Renewable Energy and Energy Efficiency

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This annex describes the various WBG institutions and units and the role that each plays in contributing to renewable energy and energy efficiency. It also provides definitions of renewable energy and energy efficiency. Last, it discusses the methodology used to compute the data in this report.

## Roles of the Institutions

### The World Bank Group

In this report, the WBG refers to four closely associated World Bank institutions that directly support renewable energy and energy efficiency activities.<sup>18</sup> The four institutions are the IBRD, IDA, the IFC, and MIGA. There are six operational regions under the IBRD and IDA. The report disaggregates the commitments made by these regions and institutions. In addition, the WBG is an implementing agency for the GEF. This report provides information on WBG-administered GEF projects. The WBG's Carbon Finance Business (CFB-IBRD) is reported separately because it is a unique business line that purchases emissions reductions and does not directly invest in projects.

### The IBRD

The IBRD (International Bank for Reconstruction and Development) aims to reduce poverty in middle-income and creditworthy poorer countries by promoting sustainable development through loans and guarantees and, in the nonlending area, AAAs (<http://www.worldbank.org/ibrd>).

### IDA

Contributions to IDA (International Development Association) enable the World Bank to provide approximately US\$6–9 billion a year in highly concessional

financing to the world's 80 poorest countries (home to 2.5 billion people). IDA's interest-free credits and grants are vital because these countries have little or no capacity to borrow on market terms (<http://www.worldbank.org/ida>).

### The IFC

The IFC's (International Finance Corporation's) mandate is to further economic development through the private sector. Working with business partners, it invests in private enterprises in developing countries and provides long-term loans, guarantees, and risk management and advisory services to its clients (<http://www.ifc.org>).

### MIGA

MIGA (Multilateral Investment Guarantee Agency) provides political risk insurance against noncommercial risks to eligible foreign investors and commercial banks for qualified investments in developing member countries (<http://www.miga.org>).

### Carbon Finance

Both the IBRD and the IFC have Carbon Finance Units (CFUs) that leverage public and private investment for projects that generate greenhouse gas emission reductions. This helps to grow the market by extending carbon finance to both developing and transition economies. The funds are provided by private companies and governments seeking to purchase emission

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<sup>18</sup> There is also a fifth institution that is a part of the World Bank Group: the International Centre for Settlement of Investment Disputes (ICSID). Because this institution does not directly support any RE or EE activities, for this annual report, World Bank Group precludes ICSID.

reductions to learn how to originate transactions in this complex emerging market. The Carbon Finance Business (CFB-IBRD) is divided into separate business lines—the IBRD CFU ( ) and the IFC CFU (<http://www.ifc.org/carbonfinance>).

### **ESMAP**

ESMAP (Energy Sector Management Assistance Program) is a global technical assistance program and knowledge partnership sponsored by a group of donors, including Canada, Denmark, Finland, Germany, the Netherlands, Norway, Sweden, the United Kingdom, the United Nations Foundation, the United Nations Development Programme, and the World Bank. ESMAP is managed by the World Bank (<http://www.worldbank.org/esmap>).

### **ASTAE**

In 1992, the World Bank and donor partners established ASTAE (Asia Alternative Energy Program) to support the transition to environmentally sustainable energy use in developing countries in Asia. ASTAE supports upstream economic and sector work, much like ESMAP, and it also provides assistance in renewable energy and energy efficiency project identification, preparation, and supervision (<http://www.worldbank.org/astae/>).

### **The GEF**

The Global Environment Facility (GEF), established in 1991, helps developing countries fund projects and programs that protect the global environment. GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.

GEF is an independent financial organization that provides grants to developing countries for projects that benefit the global environment and promote sustainable livelihoods in local communities. The GEF is the WBG's largest partner in the area of renewable

energy and energy efficiency investments (<http://www.thegef.org>).

## **Definitions**

Following are the definitions used for reporting on the WBG's activities. Commitment amounts used in the report were prorated to include only those project components that clearly fall into one of the following categories.

### **New Renewable Energy**

Projects that had at least one of the following were considered projects with a new renewable energy component: solar energy for heat and power, wind energy for mechanical and electrical power generation, geothermal and biomass energy for power generation and heat, and hydropower of 10 MW or less per installation.

### **Energy Efficiency**

Energy efficiency comprises end-use thermal and electricity efficiency activities (for example, industry, transport, buildings, and appliances), power sector rehabilitation, loss reduction in transmission and distribution, and improvements in the efficiency of district heating systems. Hydropower rehabilitation projects, which do not result in increased capacity (MW), are also classified as energy efficiency. However, this report does not include loss reduction due to rehabilitation of transmission or distribution networks if the share of transmission and distribution investments cannot be clearly disaggregated from other objectives, such as network expansion and load increase. Neither does it include Development Policy Loan commitments unless the share attributable to efficiency can be clearly determined.

### **Hydropower Greater Than 10 MW**

The World Bank considers hydropower, regardless of scale, to be renewable energy. However, for reporting purposes, hydropower projects in which the

installed capacity at a single facility exceeds 10 MW are reported separately. Pumped storage, run-of-river hydropower, and hydropower projects with dams are included here if the capacity exceeds 10 MW.

The WBG supports projects that may be cross-sectoral in nature. For example, renewable energy and energy efficiency components may be embedded within an agricultural, health, or power project. In such blended projects, sometimes it is not easy to specify precisely what the size of each sectoral component is. In this report, as far as possible, great care has been taken to show only the commitment amount associated with new renewables, energy efficiency, or hydropower greater than 10 MW. For example, in a particular project, the total commitment made by the IBRD and IDA may be US\$100 million. This project may have three different sectoral components: agro-industry, 50 percent; health, 30 percent; and new renewables, 20 percent. In such a case, only US\$20 million has been included as the project's contribution to renewable energy.

### Different Reporting Styles

The various World Bank institutions have differing styles of reporting their data because of their different kinds of business. For example, MIGA provides guarantees to projects against various kinds of risks, whereas the IBRD and IDA provide project finance and guarantees. Emissions reductions purchases by carbon finance are a revenue stream. The IFC provides both equity and loan financing, as well as guarantees. For the purposes of this report and to arrive at an estimate of the WBG's total commitments toward renewable energy and energy efficiency, we have added commitments made by each WBG institution. The following distinctions should be kept in mind when reading this report.

#### IBRD and IDA

For IBRD- and IDA-assisted projects, *commitment amounts* toward renewable energy, energy efficiency, or both for each project have been used to estimate

the cumulative total for the WBG. Only those project components that could clearly be attributed to a renewable energy and energy efficiency category were counted.

#### The IFC

The report shows IFC (International Finance Corporation) net investments from its own account for renewable energy and energy efficiency investment. Previous IFC assessments referred only to stand-alone projects whose sole focus was energy efficiency or renewable energy, thus missing the full scope of investment in sustainable energy undertaken as a component of larger investments in various sectors. The IFC has since revised its methodology so that it now identifies renewable energy and energy efficiency investments in commitments it has made in other sectors, such as agriculture, water supply, industry, and transport, and in corporate loans to financial intermediaries. The new methodology assesses the percentage of IFC investment in proportion to the full project cost and applies that proportion to the full renewable energy or energy efficiency project value. This methodology has been used to update the IFC's fiscal 2005 renewable energy and energy efficiency commitment amounts. For more details, see "Choices Matter: 2005 Sustainability Report" at [www.ifc.org/SustainabilityReport](http://www.ifc.org/SustainabilityReport).

#### MIGA

MIGA (Multilateral Investment Guarantee Agency) normally reports the maximum liability of its guarantee and the foreign direct investment that the guarantee leveraged. For the purposes of arriving at a cumulative total for the WBG, this report added together only the MIGA maximum liability.

#### Carbon Finance

For purposes of this report, to compare carbon asset purchases and regular project financing, this report considered signed Emission Reductions Purchase Agreements to be the appropriate measure and added

those amounts to arrive at the total commitment – that is, the Carbon Finance Business' (CFB-IBRD's) equivalent of Board approval for World Bank loans.

#### **The GEF**

For approved GEF (Global Environment Facility) projects, this report uses the commitment amounts for each project.