

# World Bank Group

## Renewable Energy & Energy Efficiency Performance

### July 2004 - June 2005

## Q&A

**Q. Did the World Bank Group meet the June 2004 Bonn International Conference on Renewable Energies commitment it made to scale up New-Renewable Energy (New-RE)<sup>1</sup> and Energy Efficiency (EE) by 20 percent per annum over the average of World Bank New-RE and EE commitments made over the previous three years?**

A. The World Bank Group's progress in RE and EE in the fiscal year ending June 30, 2005, is as follows:

- World Bank Group support (i.e., IBRD, IDA, IFC, Global Environment Facility (GEF) co-financing and Carbon Finance, as well as MIGA guarantees), for RE and EE totaled \$748 million<sup>2</sup>, which included:
  - \$449 million for hydropower with capacity of more than 10 MW per facility;
  - \$212 million for New-RE;
  - \$87 million for EE;
  - a total of 40 RE and EE projects in 28 countries were supported<sup>3</sup>; and
  - each dollar of World Bank Group commitment in RE and EE projects leveraged an average of nearly five dollars from public and private sources.
- In meeting the Bonn commitment, the World Bank Group committed \$299 million in support of New-RE and EE in fiscal year 2005. This exceeds the Bonn commitment value of \$251 million corresponding to the 20 percent growth rate.<sup>4</sup>

The World Bank Energy and Mining Sector Board will issue a report in mid-November, *World Bank Group Progress on Renewable Energy and Energy Efficiency: Fiscal Year 2005*.<sup>5</sup> This report gives the progress that the WBG made in FY05 in expanding its renewable energy and energy efficiency support. In addition to stepping up investments in renewable energy and energy efficiency, significant progress was made in capacity building assistance, engaging its partner countries to explore the full potential of renewable energy and energy efficiency opportunities, building global partnerships, and transferring know-how and good practices.

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<sup>1</sup> The World Bank supports all forms and scales of renewable energy. However, the Bonn Commitment applies to New-RE and EE where New-RE comprises of wind, solar, geothermal, biomass including landfill gas-to-energy, and hydropower with a capacity of 10 MW or less per facility. EE comprises of principally demand-side energy efficiency and improvements in district heating energy efficiency.

<sup>2</sup> Organizationally, the FY05 commitments in millions of US dollars were as follows: IBRD/IDA - 445, IFC - 61; World Bank implemented GEF - 100; IFC implemented GEF - 8; MIGA - 91; IBRD Carbon Finance - 23; and IFC Carbon Finance - 21. List of projects approved in FY05 is given in Annex 1.

<sup>3</sup> There were 8 projects in Africa, 9 in East Asia-Pacific, 10 in Europe and Central Asia, 9 in Latin America and Caribbean, 2 in the Middle East and North Africa and 3 in South Asia.

<sup>4</sup> The baseline for measuring progress in commitments is the average of New-RE and EE commitments made in FY02, 03 and 04 by IBRD, IDA, and associated GEF co-financing and Carbon Finance.

<sup>5</sup> The report will be posted at <http://www.worldbank.org/re> by mid-November 2005, and printed copies issued shortly thereafter.

**Q. Are the IFC and MIGA committed to increase its commitment to RE and EE?**

A. IFC and MIGA are fully committed to scale up their support for New-RE and EE. . In FY05, IFC and MIGA invested US\$181 million in renewable energy and energy efficiency projects. To further meeting this goal, IFC's Infrastructure and Financial Markets Departments have created new units to focus on investments in clean, environmentally friendly energy.

**Q. What is the percentage of renewable energy and energy efficiency support compared with overall WBG energy lending?**

A. In FY05, the World Bank Group share of RE and EE financing was 26.2 percent of total energy sector commitments. As a share of power sector commitments, RE and EE financing was 50.4 percent.<sup>6</sup>

The WBG results can be contrasted with IEA's 2003 World Energy Investment Outlook which forecasts that in the period 2001 – 2010, OECD countries will invest 8.3 percent of total energy sector investments in renewable energy. As a percent of OECD power sector investments, OECD renewable energy investment is expected to be 14.5 percent during the same timeframe.

**Q. Does the World Bank Group support grants and no-interest credits for clean energy?**

A. Between fiscal years 1990 and 2005, WBG-executed RE and EE projects received total commitments of \$9,023 million of which GEF grant assistance was \$862 million (9.6 percent). Moreover, IDA no-interest credits to the poorest developing countries for RE and EE was \$1,899 million (21 percent) during the same period. In addition, grant-funded technical assistance support is provided through the Energy Sector Management Assistance Programme (ESMAP) and the Asia Sustainable and Alternative Energy Program (ASTAE).

It is the WBG view that given the limited availability of grants and no interest credits, these funds should be used to leverage considerably more funds from private and public sources given the enormous unmet energy needs in developing countries.

**Q. Does the World Bank take climate change into consideration in project lending, and is Carbon Finance being used to fund wind, small hydro, or solar power?**

A. There were 22 GEF and Carbon Finance RE and EE projects approved in FY05 (see Annex 1). Nearly half (48 percent) of the WBG Carbon Finance funding went to renewable energy, including wind and small hydro. Other technologies supported by Carbon Finance were energy efficiency (14 percent), coal bed methane (13 percent), waste management (19 percent) and forestry (6 percent). GEF contributed 14.4 percent (\$108 million) of the total RE and EE funding. Such support was possible because climate change considerations were taken into account in project lending. The other projects were economically and financially viable without needing climate considerations, which is a positive development for RE and EE.

Over the course of the last two fiscal years, there has been a trend towards increased integration of RE and EE into long term development strategies such as Poverty Reduction Strategy Papers (PRSP) and Country Assistance Strategies (CAS). The percentage of CAS and PRSP that include substantive reference to RE and EE grew from 61 percent in FY04 to 74 percent in FY05 in the 62 CAS and PRSP that were issued in FY04-05. This is partly due to Bank engagement with partner countries during planning processes, and more importantly to countries recognizing the potential and value of RE and EE for development.

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<sup>6</sup> In FY05, total IBRD, IDA, IFC financing, GEF co-financing, Carbon Finance commitments and MIGA guarantees were: \$748 million for RE & EE; \$2,857 million for energy; and \$1,485 million for power.

**Q. Are there regional or national renewable energy lending targets?**

A. Some countries for developmental and/or strategic reasons have set, or are establishing national goals for RE. For example, China passed the Renewable Energy Law in March 2005, with a national RE goal of 10 percent electricity from RE by 2020. The World Bank supported the Government of China in formulating the law and approved the IBRD and GEF-assisted Adaptable Program Loan – China Renewable Energy Scale-up Program in June 2005 to support the implementation of the law. Support for RE and EE policy and planning of a similar nature has been and is being provided to South Africa, Mexico, Nicaragua, Croatia, Sri Lanka, and the Philippines, among others.

**Q. Is there funding available for community level projects or micro-credit programs?**

A. Presently there are a large number of projects that support the provision of renewable energy services using community-based approaches and/or micro-credit. The World Bank Group is the largest financier among International Financial Institutions utilizing these approaches, and is targeting more than 1.2 million households using a range of technology options including solar photovoltaics and small wind for households and village schemes, micro-hydro or biomass powered mini-grids, biogas plants, improved cook stoves, and community forestry and fuel wood. A selection of such projects is listed below:<sup>7</sup>

- Argentina: Renewable Energy in Rural Markets
- Bangladesh: Rural Electrification & Renewable Energy Development
- Benin: Energy Services Delivery
- Bolivia: Decentralized Energy, Information & Communications Technologies for Rural Transformation
- Cambodia Rural Electrification and Transmission
- Ecuador: Power and Communications Sector Modernization and Rural Services
- Haiti Community Driven Development
- Honduras: Forests and Rural Productivity
- India: Renewable Resources Development
- Indonesia: Solar Home Systems
- Laos: Southern Provinces Rural Electrification
- Mali: Rural Community Development
- Mexico: Community Forestry II
- Mozambique: Energy Reform and Access Project
- Nepal: Power Development Project in support of the Rural Energy Development Programme
- Nicaragua: Off-grid Electrification for Rural Development
- Papua New Guinea: Teacher Solar Lighting Project
- Philippines: Rural Power
- Senegal: Electricity Services for Rural Areas, and Sustainable and Participatory Energy Management
- Sri Lanka: Energy Services Delivery, and Renewable Energy for Rural Economic Development
- Swaziland: Energizing Rural Transformation
- Tanzania: Energizing Rural Transformation
- Uganda: Energy for Rural Transformation

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<sup>7</sup> Details on these and other projects using community-based approaches and micro-credit to support RE and EE can be obtained from:  
<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,menuPK:115635~pagePK:64020917~piPK:64021009~theSitePK:40941,00.html>

**Annex 1**  
**List of FY05 Renewable Energy and Energy Efficiency Projects**  
*(All amounts in millions of U.S. dollars)*

No.	Country	Project Name	Energy Type	Financing Source	RE or EE Component Financing
<b>Africa Region</b>					
1	Benin	Energy Service Delivery APL <sup>i</sup>	Biomass	IBRD/IDA	5.70
2	Burkina Faso	BF Power Sector Development <sup>ii</sup>	EE (DSM)	IBRD/IDA	3.38
3	Kenya	Energy Sector Recovery <sup>iii</sup>	Geothermal	IBRD/IDA	31.50
4	Rwanda	Urgent Electricity Rehabilitation SIL <sup>iv, v</sup>	Hydro<10MW EE	IBRD/IDA IBRD/IDA	4.70 0.90
5	Senegal	Rural Electric Service <sup>vi</sup>	Biomass	IBRD/IDA	4.10
6	Sierra Leone	Bumbuna Support SIL	Hydro>10MW	IBRD/IDA	12.50
7	Sierra Leone	Bumbuna Hydro Completion	Hydro>10MW	IBRD/IDA	38.00
8	Sierra Leone	Power & Water SIL	Hydro>10MW	IBRD/IDA	0.57
<b>East Asia &amp; Pacific Region</b>					
9	China	Renewable Energy Scale-Up Program	Wind, biomass	GEF (WB) IBRD/IDA	40.22 87.00
10	China	Heat Reform & Building EE	EE	GEF (WB)	18.00
11	China	PCF Xiaogushan Hydropower	Hydro>10MW	IBRD Carbon Finance	10.00
12	Lao PDR	Nam Theun Social & Environment	Hydro>10MW (mitigation)	IBRD/IDA	20.00
13	Lao PDR	Nam Theun 2 Power	Hydro>10MW	IBRD/IDA	42.00
14	Lao/Thailand <sup>vii</sup>	Nam Theun 2	Hydro>10MW	MIGA	90.60
15	Philippines	PCF-Northwind Bangui Bay	Wind	IBRD Carbon Finance	1.40
16	Vietnam	Rural Energy II <sup>viii</sup>	EE	GEF (WB)	5.25
<b>Europe &amp; Central Asia Region</b>					
17	Bulgaria	PCF-District Heating	EE - district heating	IBRD Carbon Finance	4.34
18	Bulgaria	Energy Efficiency	EE	GEF (WB)	10.00
19	Croatia	Renewable Energy Resources	RE	GEF (WB)	5.50
20	Moldova	Renewable Energy from Agric. Waste	Biomass	GEF (WB)	0.68
21	Poland	Energy Efficiency	EE	GEF (WB)	11.00
22	Romania	Programmatic Adjustment Loan <sup>ix</sup>	EE	IBRD/IDA	10.00
23	Romania	Energy Community of South East Europe	Hydro>10MW rehabilitation	IBRD/IDA	84.30
24	Russian Federation	Kazan Municipal Development <sup>x</sup>	EE	IBRD/IDA	8.75
25	Russian Federation	Russian Sustainable Energy Finance Program	EE	GEF-IFC	7.00
26	Ukraine	Hydropower Rehabilitation	Hydro>10MW rehabilitation	IBRD/IDA	85.86
<b>Latin America &amp; Caribbean Region</b>					
27	Brazil	Brascan Energetica	Hydro>10MW	IFC Carbon Finance	11.00
28	Chile	Hornitos Hydropower	Hydro>10MW	IBRD Carbon Finance	1.58
29	Dominican	Basic Energy	Wind	IFC	12.00

No.	Country	Project Name	Energy Type	Financing Source	RE or EE Component Financing
	Republic				
30	Ecuador	Umbrella of Hydro Projects	Hydro>10MW	IBRD Carbon Finance	1.81
31	Honduras	La Esperanza Hydroelectric Development	Hydro>10MW	IBRD Carbon Finance	0.84
32	Mexico	Waste Management and Carbon Offset	Hydro<10MW	IBRD Carbon Finance	0.60
33	Peru	Poechos Hydropower	Hydro>10MW	IBRD Carbon Finance	0.60
34	Peru	Santa Rosa Hydro	Hydro<10MW	IBRD Carbon Finance	1.50
35	Peru	Peru Bio fuel	Biofuel	GEF (IFC)	1.00
<b>Middle East &amp; North Africa Region</b>					
36	Tunisia	Energy Efficiency Program / Industrial Sector	EE	GEF (WB)	8.50
37	Yemen	Rural Electrification & Renewable Energy Development <sup>xi</sup>	RE	GEF (WB)	0.55
<b>South Asia Region</b>					
38	Afghanistan	Emergency National Solidarity - Supplemental <sup>xii</sup>	RE	IBRD/IDA	5.60
39	India	Allain Duhangan Hydropower	Hydro>10MW	IFC	49.00
40	India	BCML Bagasse Cogeneration Plants	Biomass	IFC Carbon Finance	10.00

Because the WBG supports many cross-sectoral projects, RE and EE components are sometimes buried within larger projects. For example, RE and EE components could be embedded within an agricultural, health, or power project and may not be not coded as an RE or EE component. These endnotes help identify those smaller RE and EE components.

i This project contains a biomass component of US\$5.7 million.

ii This project dedicates US\$3.38 million to support demand-side management and energy efficiency initiatives.

iii The figure of US\$31.5 million includes the Bank's 50% commitment for the construction of a geothermal plant, including the studies and engineering for the plant.

iv This project includes US\$4.7 million for the rehabilitation and construction of small and micro-hydro units, and for feasibility studies for future hydro projects.

v This project includes US\$0.9 million for the efficient utilization of biomass resources.

vi This project includes US\$4.1 million for two sub-components: Sustainable Wood-fuels Supply Management and Demand Management and Inter-fuel Substitution Options.

vii Thailand as power purchaser was a signatory to the guarantee agreement

viii This GEF grant of US\$5.25 million is to be used for capacity building for energy efficiency activities.

ix This project includes US\$10 million for district heating restructuring and is one of 3 energy sector policy objectives.

x This project dedicates US\$8.75 million to district heating activities.

xi The renewable energy component of this project is 55% of a US\$1 million GEF grant.

xii This project dedicates 20% (US\$5.6 million) of the US\$28 million IDA grant to renewable energy.