# **2** Participation in the World Bank's Prototype Carbon Fund (PCF)

## 1 Outline of the PCF

The World Bank's Prototype Carbon Fund (PCF) was established in January 2000 to address greenhouse gas reductions internationally. The PCF enables the World Bank to effectively invest funds from contributors (governments and companies) in greenhouse gas reduction projects that are implemented in developing countries and economies in transition (Eastern European territories of former Soviet Union). Greenhouse gas reductions achieved through such investment will be shared among contributors. Kyushu Electric Power has been a member of the Fund since its establishment. In Fiscal 2002, an investment of three million dollars was made, additional to its original contribution of five million dollars.

### 2 Operational status of the PCF

The PCF plans to invest in 30-35 greenhouse gas reduction projects in various countries throughout the world. Currently, an agreement has been reached for the purchase of greenhouse gas reductions for the projects detailed in the table. Approximately 110,000 tons of CO<sub>2</sub> emission reduction has been generated from the construction of a small hydroelectric power station in Chile. Of which, 4,512 tons of CO<sub>2</sub> emission reduction has been applied to Kyushu Electric Power according to its share of contribution.

## **3** Outline of Kyoto Mechanism

The Kyoto Mechanism refers to systems that are approved to achieve the objectives stated in the Kyoto Protocol and encourage every country to achieve greenhouse gas reductions through international cooperation. Some countries, including Japan, have relatively high costs for greenhouse gas emission reduction due to past efforts towards energy conservation. The Kyoto Mechanism can help such countries to relax the economic impact of taking measures against global warming.

#### Outline





#### Projects for which the purchase agreement was reached

Host country	Outline of projects	
Latvia	Methane recovery and power generation at waste disposal sites	
Brazil	Use of charcoal for pig iron production (alternative to coal and coke)	
Chile	Construction of a small hydroelectric power plant (alternative to coal and natural gas)	
Uganda	Construction of a small hydroelectric power plant (alternative to diesel electric power generation)	
Costa Rica	Development of hydroelectric and wind power generation technologies	

#### Outline of Kyoto Mechanism

Joint Implementation	Developed countries jointly implement emission reduction pro- jects and share the reductions	
Clean Development Mechanism	Developed countries cooperate with emission reduction pro- jects in developing countries and receive resulting reductions	
Emission Trading	Developed countries trade assigned amounts	

#### Comparison of CO<sub>2</sub> emission reduction costs per measure

Measures	CO <sub>2</sub> emission reduction cost (yen/t-CO <sub>2</sub> )	Contents
Promotion of wind power generation*	12,000	Promote the use of wind power instead of thermal power for generation
Change of fuel types for thermal power generation*	4,400	Promote the use of LNG instead of coal for thermal power generation
Promotion of power generation from waste*	3,800	Promote the use of waste instead of conventional power sources
PCF	600	Estimation based on the PCF finished price (5 dollars)

Extract from the Central Environment Council Global Environment Section materials (Subcommittee for scenarios to achieve targets, June 2001) Nuclear power generation is the most excellent measure for CO<sub>2</sub> emission reduction because it is a CO<sub>2</sub> emission-free generation method of low generation cost, and does not require additional reduction cost.