

20/23 MAY 2002

METHODS FOR TECHNOLOGY TRANSFER ON CLIMATE CHANGE

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1. Basic Survey Project for Joint Implementation (JI), Etc.

In order for Japan to achieve its goal of reducing the country's CO₂ and other greenhouse gas emissions, as set forth in the Kyoto Protocol at COP3, national efforts for promoting energy conservation and technological innovation as well as such measures as Joint Implementation (JI) and the Clean Development Mechanism (CDM) are indispensable. Under the Ministry of Economy, Trade and Industry (METI), the New Energy and Industrial Technology Development Organization (NEDO) has conducted thus far 5 feasibility studies (FS) in 1997 (refer to Table 1), 40 in 1998, 49 in 1999 and 49 in 2000 for promoting application of JI and CDM. The objective of this undertaking is to identify potential projects and offer more incentive to Japanese private firm that intend to pursue the projects.

Among the FS, the "Introduction of Trolley Buses with Energy Conservation Improvement" implemented in Mexico in 1997, has been carried out. In April 1998, an agreement on a bank loan of approximately US\$50 million was concluded between official and private banks of Japan and an official bank of Mexico. Mitsubishi Electric Corporation, the implementing organization of this FS, exported 200 energy-efficient trolley buses to the Traffic Bureau of Mexico City.

As a result of another FS entitled "CO₂ Reduction by Easing Traffic Congestion at Intersections" conducted by the Japan Automobile Manufacturers Association in 1997, further technological cooperation is being carried out in Thailand.

2. Model Projects for the Efficient Use of Energy

Technologies for the efficient use of energy in practical use in Japan (technologies for energy conservation and alternative energy development) are applied (such as by diffusing) to energy-intensive industrial facilities in the host country, where such technologies are not widely dispersed. The objectives are to demonstrate the effectiveness of those technologies and to serve as a model project for the establishment and dissemination of such technologies.

These technologies are also effective for reducing emissions of CO₂ and other greenhouse gases, some of the projects were recognized as Activities Implemented Jointly (refer to Table 2).

3. APEC Virtual Center

The APEC Virtual Center (APEC-VC) for region-wide Environmental Technology Exchange is a monumentally significant project launched by the Asia-Pacific economies in an attempt to come to terms with global problems. The objective of this project is to provide information through the Internet on environmental technology gathered in the APEC region by regional and local governmental authorities as well as companies and environment-related organizations in order to promote the exchange of environmental technology, thus contributing to improvements in environmental technology and environmental conservation within the region. In other words, this activity may be described as an “Environmental Technology Exhibition” on the Internet.

This project has the status of a joint official project, established at the 7th APEC Ministerial Meeting and the 3rd APEC Economic Leaders’ Meeting in Osaka of November 1995.

4. Climate Technology Initiative (CTI)

The Climate Technology Initiative (CTI) is a multinational initiative of the 23 countries of the International Energy Agency (IEA) and the Organization for Economic Cooperation and Development (OECD). Mr. T. Becker of the Danish Energy Agency currently chairs the Initiative. The IEA/OECD serves as the Secretariat for the CTI.

The CTI promotes the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) by fostering international cooperation for accelerated development and diffusion of climate-friendly technologies. The CTI provides an important mechanism to help OECD countries perform their commitment to the Convention to promote the transfer of climate-friendly technology to developing countries and those with economies in transition.

As one of the CTI activities, informative seminars are held in developing and transition countries. Each seminar caters to the needs of the region, and to those of the UNFCCC process. The location of the CTI/Industry Joint Seminars on Technology Diffusion rotates among four regions, with the objective of visiting each region once annually. For an illustration of this aspect of the joint industry seminar series, see the attached map.

As such, the CTI seminars provide (i) opportunity for the private sector to voice their policy recommendations to key decision-makers, helping to create a climate that attracts environmentally sound technologies; (ii) a platform to pave the way for project development; (iii) insight into financing opportunities for climate projects, including the Clean Development Mechanism (CDM), and risk management opportunities.

In addition, the CTI holds training courses in each developing region and in the countries with economies in transition. Two training courses have been held in Asia, and one each in Latin America, the Caribbean, Eastern Europe and North Africa. The training courses are designed to “train the trainers.” Countries are asked to select participants who will be in a position to return to their organizations and share information and techniques that are disseminated at the events. The training course format allows for exploration of concepts in significant detail over a week long period.

5. Others

In accordance with the efforts mentioned above, the “World Technology Bank for the Environment” may be the most appropriate and the shortest way to achieve our goal.

Table 1: Feasibility Studies by NEDO in FY1997

<i>Title</i>	<i>Host Country</i>	<i>Entrusted Organization</i>
Introduction of Trolley Buses with Energy Conservation Improvement	Mexico	Mitsubishi Electric Corp.
CO ₂ Reduction by Easing Traffic Congestion at Intersections	Thailand	Japan Automobile Manufacturers Association
Heat Control Improvement of Hot Blast Furnaces and Heating Ones	China	Japan Iron and Steel Federation
Effective Energy Utilization in Buildings	Indonesia	Shimizu Corp.
Facilities Installation of Thermal Power Generation for Industries	China	Hitachi, Ltd.

Table 2: Model Projects for the Efficient Use of Energy

<i>Theme</i>	<i>Host Country</i>	<i>Term</i>
Blast Furnace Hot Stove Waste Heat Recovery	China	1993-1995
Soot Blower	China	1993-1996
Variable-Speed Clutch for IDF and FDF	China	1993-1996
Oil Refinery Power Recovery	China	1993-1996
Coal Moisture Control	China	1993-1996
Application of Pre-grinders	Indonesia	1993-1996
Waste Heat Recovery from an Ammonia Plant Primary Reformer	China	1994-1997
Blast Furnace Top Pressure Recovery Power Generation	China	1994-1998
Sinter Cooler Waste Heat Recovery	China	1995-1997
Cement Plant Waste Heat Recovery Power Generation	China	1995-1997
Coke Dry Quenching <AIJ>	China	1997-2000
Utilization of Paper Sludge and Solid Waste <AIJ>	Indonesia	1997-2000
Effective Utilization of Energy in Re-heating Furnace in the Steel Industry <AIJ>	Thailand	1997-1999
Energy Conservation in Electric Furnaces Used for Ferro-Alloy Refining <AIJ>	China	1998-2000
Utilization of Waste Heat from Incineration of Refuse <AIJ>	China	1998-2001
Reduction of Electric Power Consumption in Cement Plants <AIJ>	Vietnam	1998-2000
Waste Gas Recovery from Oxygen Converters	China	1998-2001
Blast Furnace Hot Stove Waste Heat Recovery	China	1998-2001
Equipment for Recovery through Combustion of Waste from Paper and Pulp Mills <AIJ>	Thailand	1998-2001
Energy Recovery from Waste Gas and Water in Acrylonitrile Plants	China	1999-2001
High Efficiency Combustion Control System in Re-heating Furnaces for Iron and Steel	China	1999-2001
Utilization of Waste Heat from Incineration of Industrial Waste at Industrial Estates <AIJ>	Thailand	1999-2001