Role of Finance for the Low Carbon Economy

~ Public Private Financial Partnership ~

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Transition to Low Carbon Economy

Scale up Low Carbon Investment

Scale up Low Carbon Finance

Bottleneck
1 Technology
   - Diffusion of technology
   - R&D investment
2 Funding
   - Role of private finance
   - Role of FI in developing countries

Solution of JBIC
1 Message to the market : LIFE( USD 5 billion), GREEN( USD 4 billion)
   mobilization of private finance (Public Private Finance)
   Commercially Viable BAT
2 Prioritize by J-MRV
“LIFE” (Leading Investment to Future Environment) Initiative by JBIC

- The LIFE will …
  - support both public and private sectors,
  - co-operate with Multilateral Development Banks (MDBs) and mobilize private finances.
- The JBIC’s financial support under the Initiative will be around **5 Billion USD for the next 2 years.**

4 Main targeted sectors of the Initiative are ...
- **Clean Power Generation** (Solar, Geothermal, Wind Power, Clean Coal Power Plant, etc)
- **Energy Efficiency Improvement** (Upgrading of Existing Transmissions and Distributions, Modernization and Heat Recovery of Steel Furnaces and Cement Kilns, ESCO (Energy Service Company), etc.)
- **Water** (Water Purification and Supply, Sewage System, Wastewater Treatment, Desalination and Water Processing, etc)
- **Urban Transportation** (Modal Shift in Densely Populated Areas, etc)
## Projects Financed by LIFE

<table>
<thead>
<tr>
<th>No.</th>
<th>Month/Year</th>
<th>Region</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jul. 2009</td>
<td>India</td>
<td>High Energy-Efficient Boiler Manufacturing Project (for Coal-Fired Plant)</td>
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<td>2</td>
<td>Oct. 2009</td>
<td>UAE</td>
<td>IWPP Project</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>Oct. 2009</td>
<td>Asia</td>
<td>Fund Focusing on Efficient Energy and the Environment Sector</td>
</tr>
<tr>
<td>5</td>
<td>Dec. 2009</td>
<td>Asia</td>
<td>Infrastructure Fund Focusing on Emerging Asian Countries</td>
</tr>
<tr>
<td>6</td>
<td>Dec. 2009</td>
<td>Kazakhstan</td>
<td>Export Loan for Thermal Power Generation Equipment Utilizing Gas</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Generated by the Oil Field</td>
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<tr>
<td>7</td>
<td>Jan. 2010</td>
<td>Korea</td>
<td>Export Loan for By-product Gas-fired Combined Cycle Power Generation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Equipment for Iron &amp; Steel Plant</td>
</tr>
<tr>
<td>8</td>
<td>Jan. 2010</td>
<td>UAE</td>
<td>Fund Focusing on Climate Change Investment Universe</td>
</tr>
<tr>
<td>9</td>
<td>Mar. 2010</td>
<td>Indonesia</td>
<td>Thermal Power Plant Expansion Project</td>
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<tr>
<td>10</td>
<td>Mar. 2010</td>
<td>Indonesia</td>
<td>Thermal Power Plant Project</td>
</tr>
<tr>
<td>11</td>
<td>Mar. 2010</td>
<td>Mexico</td>
<td>Thermal Power Plant Project</td>
</tr>
<tr>
<td>12</td>
<td>Mar. 2010</td>
<td>Maldives</td>
<td>Water Supply and Sewerage System Operation Project</td>
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</tbody>
</table>

Total amount of financing by LIFE including private funding as co-financing is USD 5.4 billion as of 31 March, 2010.
**New Financial Program (GREEN) and J-MRV**

(Global action for reconciling economic growth and environmental conservation)

**JBIC will review the followings**
1. Climate change policy of the host country
2. Technology to be used
3. Reduction amount by J-MRV

**J-MRV**
JBIC are going to establish a guideline for quantifying GHG emission reduction amounts. It should be “simple, practical and internationally acceptable.”

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**Diagram:**

- **JBIC “GREEN”**
- **Finance**
- **GHG emission reduction projects**
- **Deployment**
- **Commercially viable BAT**
  - (best available technology)
- **Dialogue**
- **Ownership**
- **Reduction amount**
- **Share**
- **J-MRV**
- **GHG emission reductions**
- **Possibility**
- **Future carbon market**

(MRV: Measurement, reporting and verification)
Commercially viable BAT

Steel Industry

1. Iron and Steel Industry

Iron and steel industry is one of the energy intensive industries, the share of total greenhouse gas emissions estimated 25% (excl. CO2, via data from top steel-making sector). According to IEA analysis, the process are complex reactions however, there are four types of steel-making:

1. Integrated steel works (ISW)
   - Integrated steel making means a major energy use for making pig iron, steel-making process, which emits a lot of CO2 gas.

2. Electric furnace process
   - Electric Furnace for making steel is a major energy use, but instead of using coke, energy is used in electric furnaces.

Almost 70% of product types in the steel-making process are related to energy using CO2 emissions, most of which are electricity-related.

1-1 CDQ (Coke Dry Quenching)

Description
Coke dry quenching is equipment, recovering the waste heat of the coke when using the traditional quenching using water (wet quenching) of the coking process and improves the working climate, and recovers the sensible heat of the coke can be applied at new and retrofitted at existing plants.

1-2 TRT (Top Pressure Recovery Turbine)

Description
Top Pressure Recovery Turbine (TRT) is a equipment for beneficial use of waste gas pressure generated from the steelworks’ blast furnace top and converted into electricity using a turbine. Energy savings, noise is reduced when gas passes through the turbine.

Although the pressure difference is low, the large gas volumes make the recovery economically feasible.
Public Sector
- Improvement of investment climate

Private Sector
- Driving force

Financial Sector
- Push last one mile

Change of Lifestyle
Use of Technology

Capacity of Our Planet

Better investment climate, More investment