Climate Change as a Business Opportunity: Roles of Financial Institutions on Mitigation and Adaptation of Climate Change

Financing Energy Efficiency

Samuel Tumiwa
Senior Energy Specialist
Regional and Sustainable Development Department
Presentation Outline

• Barriers to Financing EE
• ADB’s Clean Energy and Environment Program
• ADB’s Experience Financing Energy Efficiency (EE)
• New Approached to Financing EE
Barriers Against Financing Energy Efficiency

- For ADB
  - Transaction Amounts
  - High Transaction Costs

- For Financial Institutions
  - Not at Problem for Multi-nationals
  - More of a Problem for Regional and Local FIs
  - Basically, Corporate Finance or Loan for Plant and Equipment
  - Balance Sheet Lending
  - Therefore not a Priority
Possible Solutions

- ADB to Develop New Approaches and Financing Mechanisms

- FI do not Need a Line of Credit. They Want to Share the Risk
  - Partial Credit Guarantees
  - Performance Guarantees
  - Need Technical Support
  - May Need to Re-Look at their Underwriting Criteria
Clean Energy and Environment Program

Energy Strategy

Energy Efficiency Initiative
Increase investments for clean energy to at least $1 billion a year, Establish the Clean Energy Financing Partnership Facility

Carbon Market Initiative
Use of Carbon Market to catalyze greater investments in clean energy

Sustainable Transport Initiative
Develop a coherent framework to deliver modalities for effective and efficient transportation systems

Energy for All
Increase access to modern forms of energy for the poor

REACH
Four funds to promote clean energy from the governments of
- Canada
- Denmark
- Finland
- The Netherlands

Knowledge Hubs
- Tsinghua University, PRC
- Asian Institute of Technology, Thailand
- The Energy Research Institute, India

Adaptation
- Regional/Subregional Cooperation
- National Adaptation Support
- Mainstreaming Adaptation to Project Design

Public and Private Opportunities for Clean Energy Investments
ADB’s Energy Policy

- ADB’s Energy Policy identifies four operational priorities:
  - Poverty reduction
  - Promoting private sector involvement
  - Addressing regional and global environmental impacts
  - Promoting regional cooperation

- Currently Reviewing Energy Policy:
  - Greater focus to address energy security and climate change through improved energy efficiency and greater use of indigenous forms of renewable energy
## ADB’s Clean Energy Loans: Past and Future

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Approved Loans ($ million)</th>
<th>Clean Energy Investment ($ million)</th>
<th>% Increase CE Investment (yr to yr)</th>
<th>CE as % of overall ADB Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>6,120</td>
<td>206</td>
<td>0</td>
<td>3.37</td>
</tr>
<tr>
<td>2004</td>
<td>5,203</td>
<td>381</td>
<td>84.95</td>
<td>7.32</td>
</tr>
<tr>
<td>2005</td>
<td>5,957</td>
<td>638</td>
<td>67.45</td>
<td>10.71</td>
</tr>
<tr>
<td>2006</td>
<td>7,657</td>
<td>833</td>
<td>30.56</td>
<td>10.88</td>
</tr>
<tr>
<td>2007*</td>
<td></td>
<td>911</td>
<td>9.36</td>
<td>-</td>
</tr>
<tr>
<td>2008*</td>
<td></td>
<td>1,234</td>
<td>35.46</td>
<td>-</td>
</tr>
<tr>
<td>2009*</td>
<td></td>
<td>1,124</td>
<td>-8.91</td>
<td>-</td>
</tr>
</tbody>
</table>

* Pipeline Loans
## ADB’s Clean Energy Loans: Across Energy & Non-energy Sectors

<table>
<thead>
<tr>
<th>Year</th>
<th>Energy</th>
<th>Agriculture</th>
<th>Water &amp; Sanitation</th>
<th>Transport</th>
<th>Multisector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Loans with CE Comp</td>
<td>Clean Energy Comp of Loans ($ million)</td>
<td>No. of Loans with CE Comp</td>
<td>Clean Energy Comp of Loans ($ million)</td>
<td>No. of Loans with CE Comp</td>
<td>Clean Energy Comp of Loans ($ million)</td>
</tr>
<tr>
<td>2003</td>
<td>6</td>
<td>140.2</td>
<td>1</td>
<td>6.0</td>
<td>2</td>
<td>9.8</td>
</tr>
<tr>
<td>2004</td>
<td>6</td>
<td>274.5</td>
<td>1</td>
<td>1.1</td>
<td>1</td>
<td>8.0</td>
</tr>
<tr>
<td>2005</td>
<td>5</td>
<td>589.1</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>8.5</td>
</tr>
<tr>
<td>2006</td>
<td>11</td>
<td>801.0</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>2007*</td>
<td>26</td>
<td>897.5</td>
<td>1</td>
<td>4.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2008*</td>
<td>15</td>
<td>1,151.7</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009*</td>
<td>21</td>
<td>1,082.0</td>
<td>2</td>
<td>5.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>4,936.0</td>
<td>6</td>
<td>18.4</td>
<td>6</td>
<td>26.6</td>
</tr>
</tbody>
</table>

* Pipeline Loans
ADB’s Energy Efficiency Initiative (EEI)

- ADB launched EEI in July 2005
- Expand EE operations to $1 billion/yr
- Focus on both supply-side and demand-side EE (including RE)
Mainstreaming EE in ADB Operations

Phase I
Initiation

- Establish rationale for expanded ADB action in EE
- Provide priorities and framework for next steps

Phase II
Formulation
(Jun 2005 – Dec 2007)

- Prepare country-level investment/action plans and project pipeline
- Design and establish the Clean Energy Financing Partnership Facility (CEFPF)
- Develop institutional capacity to scale up EE investments and perform EE monitoring & evaluation
- Pursue immediate EE investment opportunities

Phase III
Implementation

- Execute investment and action plan
- Process projects in pipeline
- Commit CEFPF fund
Clean Energy Financing Partnership Facility (CEFPF)

Objective is to “buy down” the higher costs of the new technologies to facilitate their deployment.

Targets small number of high-impact large interventions that will deploy new EE technologies

IEA identifies the crucial need for large deployment programs to bridge between EE and RE technology R&D and commercialization

Source: IEA Energy Technology Perspectives 2006
Clean Energy Financing Partnership Facility

TF Component
- Multi Donor Trust Fund
  - Individual TF
  - Individual TF

 framework agreement
- Joint or Parallel Cofinancing
- Knowledge Sharing
  e.g. secondments etc.
- Risk Sharing
  e.g. credit guarantees with first loss coverage

Projects

Grant Components of Investments
Technical Assistance
Partial Credit Guarantee for Energy Efficiency in PRC

- Local financial institutions (LFI) unwilling to make loans for EE projects
- ADB specifies a list of EE projects that we are willing to provide PCG for.
- We provide PCG facility for 3-4 banks. Up to $100 million. 80/20 for the first 10% and 60/40 for the remaining 90% of the portfolio.
- LFI uses its marketing, due diligence process, and underwriting guidelines.
- By doing this, we share the risks of EE projects and catalyze greater local financing of EE.
Examples

- Performance Guarantee in?
  - Focused on energy service companies
  - A rating agency is established through international competitive bidding
  - Agency reviews proposals/contracts
  - If technically, legally, and financially viable, ADB will put its guarantee behind a contract
  - ESCO can then take the contract to local FIs for financing
  - Performance guarantee covers the FI, not the ESCO or the equipment
Examples

• Wind in Sri Lanka
  • ADB to get the concession from government to develop wind farms in eastern Sri Lanka
  • Using CEFPF resources, ADB will set up company, do the micrositing, negotiate and sign PPA, and build wind farm
  • Once built, can sell it off.
  • Example of catalyzing investment in RE
Examples

- Waste to Energy in India
  - INR 760 million for a waste-to-energy conversion project in Delhi
  - Requested amount from CEF INR 20,000 (~ $500,000) to buy down the capital cost of the new technologies
  - Catalyze the deployment of new technologies for something that is clearly replicable and scalable.
For More Information

Email: stumiwa@adb.org

Web site: www.adb.org/clean-energy