Green Investment Financing

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Energy & Housing Department FMO
AGENDA

- FMO – an introduction
- Renewable Energy or Access to Energy?
- FMO’s perspective
- Funding in Africa
- FMO’s role
FMO – AN INTRODUCTION
FMO: Entrepreneurial Development Bank

- Unique Public-Private Partnership
- Bank license, AAA rated by S&P
- Focus sectors: FI, Energy, Housing & Agri
- Products: Equity, Mezz, Loans, Syn and CD
- Committed Portfolio: EUR 5.3 billion (2010)
- Complementary, Additional, Catalyzing
FMO & Energy

- Track record in (renewable) since 1970
- Focus sector since 2009
- Robust network, strong role including capacity to raise additional funds
- Total energy portfolio: EUR 649 mln (2010)
- Catalyzed funding in excess of EUR 2 bln
- Renewable Energy > 50%
Committed Energy portfolio

<table>
<thead>
<tr>
<th>Region</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>233</td>
<td>304</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>167</td>
<td>214</td>
<td></td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean</td>
<td>107</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Non-region specific</td>
<td>12</td>
<td>11</td>
<td>9</td>
</tr>
</tbody>
</table>
Committed Energy portfolio 2010

€ x 1,000

Africa Green Investment Conference
Renewable Energy
or
Access to Energy
SSA power generation capacity lower than any other region

- Africa: 2.64%
- Middle East: 3.46%
- Central and South America: 5.37%
- Non-OECD Europe and Eurasia: 9.12%
- OECD Asia: 9.37%
- OECD Europe: 18.88%
- Non-OECD Asia: 24.59%
- OECD North America: 26.56%

Capacity growth in SSA has stagnated

Tariffs vs. reliability supply

- Average tariff in SSA: $0.12 per kWh vs.
  - $0.04 in South Asia
  - $0.07 in other regions (Europe, Latin America, East Asia)

- Power outages: 10-70 days p.a. (once every 5 days!)

- Reliability dependent on stable base load

- Quality of transmission & distribution
SSA dependent on conventional energy (as OECD-Europe)

<table>
<thead>
<tr>
<th>Installed generating capacity by type – 2007</th>
<th>Installed power capacity - 2007 Sub-Sahara Africa</th>
<th>Installed power capacity - 2007 OECD- Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>coal-fired</td>
<td>41 GW</td>
<td>200 GW</td>
</tr>
<tr>
<td>natural-gas-fired</td>
<td>40 GW</td>
<td>175 GW</td>
</tr>
<tr>
<td>hydroelectric</td>
<td>22 GW</td>
<td>147 GW</td>
</tr>
<tr>
<td>liquids-fired</td>
<td>11 GW</td>
<td>54 GW</td>
</tr>
<tr>
<td>nuclear</td>
<td>3 GW</td>
<td>131 GW</td>
</tr>
<tr>
<td>geothermal</td>
<td>0 GW</td>
<td>1 GW</td>
</tr>
<tr>
<td>wind</td>
<td>0 GW</td>
<td>57 GW</td>
</tr>
<tr>
<td>solar</td>
<td>0 GW</td>
<td>5 GW</td>
</tr>
<tr>
<td>other renewable” includes biomass, waste, and tidal/wave/ocean</td>
<td>0 GW</td>
<td>25 GW</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117 GW</strong></td>
<td><strong>795 GW</strong></td>
</tr>
</tbody>
</table>

Renewable energy to be offset with conventional energy

- Renewable Energy supply less predictable vs. thermal power

- In order to provide stable, reliable and continuous electricity supply, diversification of fuels for power generation needed

- To meet peak power demand (in Africa in the evenings) and for stability of a distribution network, thermal power always needed!
Renewable energy needs a well developed enabling environment

- Development of renewable energy needs regulatory framework

- Most countries in SSA lack regulatory framework that facilitates renewable energy

- South Africa is furthest in development of such a framework in SSA

- Implementation of REFIT program … however has not been a smooth process
FMO’s PERSPECTIVE
- Priority to Access to Energy over Renewable Energy in LICs

- Renewable energy is ‘next’ step, will have priority if affordable and practical (most LICs do not have feed-in tariffs)

- Global commitment in energy sector > USD 200 mln per year

- Contribute to additional new capacity of at least 1 Giga Watt
FUNDING IN AFRICA
Funding in Africa – restrictive factor?

- Fundraising share of SSA as % of total in Emerging Markets is much higher than share of total investments in SSA as % of EM
  - Fundraising in 2010 and 1H2011 6.4% and 4.7% respectively
  - Investment in 2010 and 1H2011 2.2% and 1.8% respectively

- 3Y USD credit swaps currently priced at 140bps where 3Y loan to a South African bank is priced at 150 bps

- Required Equity return on renewable energy in Europe: 9% - REFIT in South Africa based on EUR IRR of 11/12% (15% more realistic)

- Loan pricing on energy projects in Africa are similar to pricing of projects in Latin/Central America – where higher pricing is expected for Africa due to higher risk
FMO’S ROLE
FMO’s role

- Long-term financiers by mandate
- Active leading role—team up with partners
- Early stage involvement (equity/mezzanine)
- Make projects bankable (long-term finance, catalyze commercial banks)
- Add sustainable value (develop and implement environmental & social policies and good corporate governance)
Criteria for financing

- Strong strategic investor (technical know-how/support & financial support)
- Greenfield & Brownfield (expansion) projects
- Tenor up to 15 years, including grace period
- Minimum debt/equity ratio 70/30
- FMO funding up to 35% of project size
- Sweet spot transaction size: EUR 10–25 mln
THANK YOU!
Contact information

www.fmo.nl

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