Challenges and Solutions for Project Financing

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- Oikocredit International
- Renewable energy solutions for businesses
- Key risks and mitigants
- Obstacle of interest rates
- Corporate versus project finance
- Parties and agreements in project finance
- And when there is time left a few structures
Oikocredit: who we are

- Pioneer in ethical investments
- Financial cooperative since 1975
- Balance sheet over € 1 billion
- 789 partners in 71 countries
- 284 staff in 31 countries
- 54,000 investors across the globe
- Investment Areas
  - Microfinance
  - Agriculture
  - Renewable Energy

More on: www.oikocredit.coop
RE Market focus and instruments

- Off & mini Grid
  - US$ 0.2 to 1.5 million
- Distributed generation and small-size projects
  - US$ 1 to 5 million
- Large infrastructure renewable energy projects
  - US$ 6 to 15 million

Portfolio funding / securitisation

Bilateral loans & project equity

Syndicated transac. & club deals
Renewable Energy portfolio

- €66 M approved
- €42 M capital out
- 26 projects
  - 5 hydropower
  - 10 solar on-grid
  - 7 solar off-grid
  - 2 wind
  - 2 funds - mix

* including microfinance and SME finance
# Renewable energy solutions for businesses

## Reliability

- **Dumsor** (World Bank 2013 census:)

<table>
<thead>
<tr>
<th></th>
<th>Percentage of firms experiencing electrical outages</th>
<th>Number of electrical outages in a typical month</th>
<th>Duration of a typical power outage, in hours</th>
<th>Average losses due to electrical outages, as percentage of total annual sales</th>
<th>Percentage of firms owning or sharing a generator</th>
<th>Average proportion of electricity from a generator (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana (2013)</td>
<td>89.1</td>
<td>8.4</td>
<td>7.8</td>
<td>15.8</td>
<td>52.1</td>
<td>21.5</td>
</tr>
</tbody>
</table>

## Affordability

- **(for industries 18 – 26 US cents per kWh)**

## Sustainability

- **(offsetting thermal plants and local diesel generation 30% emission reduction target, 10% RE 2020)**
<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-payment</td>
<td>Incentives to pay (upfront payments, termination fee, etc.). Bundle projects in portfolio</td>
</tr>
<tr>
<td>Price</td>
<td>Margin PPA price / tariff / tail</td>
</tr>
<tr>
<td>Legal framework</td>
<td>Clear policy on rent / lease / corporate PPAs / ownership</td>
</tr>
<tr>
<td>Technical</td>
<td>Quality control</td>
</tr>
<tr>
<td>Transaction costs</td>
<td>Standardisation / portfolio DD</td>
</tr>
</tbody>
</table>
Obstacle: interest rates: GHS versus USD

Source: National Energy; Statistics Energy Commission of Ghana
## Corporate versus Project Finance

<table>
<thead>
<tr>
<th></th>
<th>Corporate Finance</th>
<th>Project Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure</strong></td>
<td>Loan to company</td>
<td>Loan to SPV</td>
</tr>
<tr>
<td><strong>Stage</strong></td>
<td>Early or Expansion 0 – 5 MW / or 1 GW+</td>
<td>Growth 5 MW – 1 GW</td>
</tr>
<tr>
<td><strong>Track record</strong></td>
<td>Financial / commercial</td>
<td>Financial / project execution</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Company (financial, commercial, guarantees)</td>
<td>Project (construction, operational, off-taker)</td>
</tr>
<tr>
<td><strong>Gearing</strong></td>
<td>30-70%</td>
<td>60-80%</td>
</tr>
<tr>
<td><strong>Rates / costs</strong></td>
<td>Variable high rates / (depending on risks)</td>
<td>Lower fixed rates / higher costs (depending on Risks)</td>
</tr>
<tr>
<td><strong>Tenor</strong></td>
<td>Short term &lt; 3 years</td>
<td>Long term /&lt; PPA</td>
</tr>
<tr>
<td><strong>Collateral</strong></td>
<td>Company assets / external guarantees</td>
<td>Project assets / Cash flows</td>
</tr>
</tbody>
</table>
Parties and agreements project finance

- Contractor
- Independent Engineer
- Operations & maint.
- Developer shareholder
- Investor shareholder
- Banks / Other Lenders
- Legal Advisor
- Legal advice
- Insurance Company
- Loans
- EPC
- O&M
- TA
- Off-taker
- PPA
- Biomass
- Incentives
- Government
- Fuel (supplier)
- Independent
- Project Company
- Financial
- Technical
- Social
- Ecological
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Funding structure without SPV

- Like a working capital loan but secured assets
- Direct relationship service Company – client
- Portfolio not ring-fenced
- Less grip on assets/portfolio
- Lower security value
- Track record essential
Portfolio funding structure with SPV

- Direct relationship
  - SPV – client
- Portfolio ring-fenced
- Grip on portfolio
- Supply agreements with solar service company

Client

SPV

Solar Service Company

Oikocredit

Legal and technical advice

PPA / rent / purchase

EPC / O&M

Direct Agreements

Loan

Admin