Financing Clean Energy Investment in India

Trends, opportunities, needs, and challenges

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- Energy Access
- Renewables
- Power Sector
- Industrial Sustainability & Competitiveness
- Low-Carbon Pathways
- Risks & Adaptation
- Technology, Finance, & Trade
National development priorities

• 21st century Infrastructure

• Indigenous manufacturing

• Jobs

• Equitable and inclusive development

• Climate adaptation and mitigation
Money does not flow where the sun shines and the wind blows

Investments in Renewables by Country

Annual Invest in Solar and Wind Sector - India

Source: BNEF
RE investment gap continues to grow. How will we get there?

Annual investment needed in India’s solar sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Distributed Rooftop Projects</th>
<th>Medium and Large Scale Projects</th>
<th>Total Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.7</td>
<td>7.0</td>
<td>9.7</td>
</tr>
<tr>
<td>2017</td>
<td>4.2</td>
<td>10.7</td>
<td>14.9</td>
</tr>
<tr>
<td>2018</td>
<td>8.3</td>
<td>13.6</td>
<td>21.9</td>
</tr>
<tr>
<td>2019</td>
<td>13.3</td>
<td>15.4</td>
<td>28.7</td>
</tr>
<tr>
<td>2020</td>
<td>13.0</td>
<td>17.6</td>
<td>30.6</td>
</tr>
<tr>
<td>2021</td>
<td>12.1</td>
<td>19.7</td>
<td>31.8</td>
</tr>
<tr>
<td>2022</td>
<td>10.6</td>
<td>21.7</td>
<td>32.3</td>
</tr>
</tbody>
</table>
Cost of finance is the (unrecognised) game in town

**Solar**

- O&M: 0.28
- Panel: 0.39
- Land: 0.06
- BOS: 0.27
- Evacuation: 0.10
- ROE: 0.75
- Debt Servicing: 0.86
- Accelerated Depreciation: -0.25
- Total: 2.44

**Wind**

- O&M: 0.49
- Wind Turbine: 0.51
- Land: 0.01
- BOS: 0.10
- Evacuation: 0.02
- Fin. Costs: 1.54
- Acc. Dep.: -0.21
- Total: 2.46

Source: Author
What can we do to facilitate investments at scale?

- Public financial institutions need to move away from simple project finance

- Underwrite risks with innovative financial instruments to attract new investors

- Common Risk Mitigation Mechanism
  - Mitigates offtaker risk, FOREX risk, and political risks for ISA member countries
  - Create a global marketplace for financiers, developers, and insurers/reinsurers
  - In the pilot phase aims to install 15 GW in 20 member countries with USD 1 billion of capitalisation

- Partial Offtake Guarantee
  - Addressing the risk posed by curtailment of RE power by system operators
  - Combining big data, actuarial science, and power systems expertise
  - Needs political buy-in from the state transmission companies
Thank you
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