Enabling Finance for Scaling up Energy Efficiency in MSMEs

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Outline

- Institutional finance for SMEs
- Learning from recent studies on EE financing
- Government support for MSME Financing
- Technology environment and major EE initiatives
- FIs perspective on EE Financing
- Understanding Financing of Energy Efficiency
- Recommendations for EE financing
Institutional finance for MSMEs

- MSME - a priority sector for banks
- Only 12% MSMEs (only about 2 lakh units) availed institutional finance*
- 1% from non-institutional sources*
- About 87% did not avail external finance*

* Source - Fourth census of MSME sector for registered units
Learning from Recent Studies

- Bankers lack the capacities to evaluate EE projects
- Banks have substantial NPAs in the MSME sector
- No simple EE assessment tool for bankers
- Credit lines do not directly promote energy efficiency technologies
- Concerns on real savings compared to BAU scenario
- Higher transaction cost for individual EE loans to MSMEs
- Adoption of collateral based lending for MSMEs rather than cash-flow based
Government support for MSME Financing

- **Technology and Quality Up-gradation Support to MSMEs (TEQUP)**
  - technical assistance for energy audits, DPRs
  - capital subsidies (25% of the project cost, maximum of Rs. 10 lakh) on EETs having energy saving of over 15%.

- **Credit Linked Capital Subsidy Scheme (CLSS)**
  - 15% capital subsidy, subject to a maximum of Rs.15 lakh for adoption of selected technologies listed under the scheme.

- **Credit Guarantee Fund Scheme for MSEs**
  - collateral free loans up to Rs 1 crores

- **Technology Up-gradation Fund Scheme (TUFS)**
  - Ministry of Textiles provides interest reimbursement (2-5%) and capital subsidy (10-30%) for investment upto Rs 5 crores.
Government support for MSME Financing

- **Venture Capital** — Equity support by SIDBI Venture Capital Limited through various funds

- **India SME Technology Services Limited** —
  - Associate organization of SIDBI
  - Large computerized database on EETs
  - Assists MSME for finance syndication through FIs
  - Developmental loan through FI for pre-technology absorption stage
  - 4E (End to End Energy Efficiency) Solutions

- **Tax Incentives**
  - Accelerated depreciation (up to 80%) on selected EETs
Energy efficient technologies are in different stages of commercialization

- **Pre commercial technologies**
  - Readymade energy efficient technological solutions not commercially available
  - R&D of new EE solutions necessary
  - Eg - melting furnaces, WHR systems for sectors like aluminium, brass, textiles, iron & steel etc.

- **Semi-commercial technologies**
  - Newly developed EETs
  - Demonstrated in few units, but not yet ‘taken-off’
  - Eg - Divided Blast Cupola melting furnace, biomass-gasifiers, hi-EE boilers
  - Need to be supported by awareness creation and replicating pilots

- **Fully commercial technologies**
  - Already available commercially in the market
  - But, yet to reach saturation level
  - Eg - IE3/IE4 electric motors, LEDs, EE pumps, invertor air compressors, recuperative burners
  - Provide concessional loans

Each stage requires different type of financial intervention
Major EE initiatives in the MSME sector

- **BEE-SME Program** in 29 MSME clusters
- **TERI–SDC Partnership project** in the foundry, glass, and brick sectors (1994-ongoing)
- **World Bank–GEF Project**: Financing Energy Efficiency at MSMEs (2010-2014)
- **TERI–IGES Research Partnership** for application of low-carbon technologies (2010-2014)
- **JICA–SIDBI Financing Scheme** for Energy Saving Projects in MSME Sector (2008-ongoing)
- **KfW–SIDBI Scheme**: Financing Energy Efficiency Projects in the MSME Sector (2009-ongoing)
- **GIZ: Indo German Energy Programme (IGEN)** (2003-2014)
FIs perspective on EE financing

- Limited demand from the MSMEs
- Lack of concessional financing schemes
- Concept of EE itself remains very confusing to the Fis
- Lack of customized banking products
- Small ticket size for EE interventions
- New risks other than financial risk
  - Technical risk
  - Commissioning risk
  - Performance risk
Understanding Financing of Energy Efficiency

- Important to distinguish between investments made for modernization/expansion with investment decision based on EE criteria

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Unit</th>
<th>CNC machine</th>
<th>Air compressor</th>
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<tr>
<td>Capital Cost</td>
<td>Rs</td>
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<td>14,00,000</td>
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<tr>
<td>Energy consumption</td>
<td>kWh/yr</td>
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<td>150,000</td>
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<td>Cost of electricity</td>
<td>Rs/kWh</td>
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<tr>
<td>Annual energy cost</td>
<td>Rs./year</td>
<td>1,50,000</td>
<td>900,000</td>
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<tr>
<td>Energy savings (current criteria)</td>
<td>%</td>
<td>60</td>
<td>30</td>
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<tr>
<td>Monetary energy savings</td>
<td>Rs/year</td>
<td>90,000</td>
<td>270,000</td>
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<tr>
<td>Payback period (recommended criteria)</td>
<td>Years</td>
<td>45</td>
<td>5.2</td>
</tr>
</tbody>
</table>

- Using energy savings based payback period rather than %age of energy savings
Criteria normally used by international energy efficiency credit lines for providing grants and low interest loans:

- IRR (on energy savings only): around 10%
- Payback period (on energy savings only): between 7–8 years
Proposed approach for EE loans

• List based approach for small ticket investments to reduce transaction costs (like JICA list)
  – Only for technologies where energy savings is certain

• Evaluate larger projects on a case to case basis
  – Only correlate energy saving and investment instead of % of energy savings
  – Seek technical assistance from skilled energy auditors for evaluating energy savings in relation to baseline
  – Verify assumptions and source of baseline data like supplier documentation
1. **Financing of pre-commercial technologies**

- **Public finance** through government for R&D
- Low cost finance from bilateral/multilateral agencies
- Funding as grant support or venture capital
- RDD&D in a phased manner

**Phase 1 Identification**
- Identify energy-intensive sectors and applications
- Conduct energy audits
- Shortlist new technologies for development

**Phase 2 Technology development and demonstration**
- Develop & demonstrate new energy efficient technologies
- Document demonstrated technologies and BOP

**Phase 3 Diffusion**
- Create awareness
- Identify and develop local service providers (LSPs)
- Hand-hold MSMEs and LSPs during implementation
2. **Financing of semi-commercial technologies**

- Higher upfront costs, poor awareness, high perceived risks
- Require financial support for a no. of years after development
- **Provide capital subsidies and concessional interest rates** for new technologies
- Making the choice attractive in contract to conventional inefficient technologies

3. **Financing of commercial technologies**

- Push through **ESCO mode and concessional lines of credit**
- Better guidelines to evaluate technologies
- Focus on IRR and payback period calculated purely on energy savings alone
Recommendations - Enabling Finance for EE

• *Leveraging MSME-Banking partner relationship*

  – Government schemes for EETs should be channelized through all *commercial banks* engaged in MSME financing
  – MSME can obtain finance from own banking partner
  – Avoiding conflicts of hypothecation of assets among multiple banks

• *Role of Government*

  – *Consultative process* for policy formulation
  – Promotion & Marketing of EE schemes in energy intensive clusters
  – Deepen the list of technologies eligible for subsidy - include semi commercial technologies
  – Strengthen local institutions
Energy Efficiency in SMEs -
A Cost Saving as well as carbon saving imperative

Thank you for your attention!

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