



UNEP/UNF-World Bank Three-Country Energy Efficiency Project

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India Country Report

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Agenda

- 3CEE Project Organization
- 3CEE Project Experience
- Information Dissemination
- Opportunities for Future Activities



Project Organization

- IREDA
- Core Group Secretariat
- Core Group composition
 - 9 Banks / FIs
 - 2 ESCO's
 - 2 industry associations.
- Functional Modalities
 - Periodic core group meetings;
 - Frequent informal interactions
- Interaction with other EE stakeholders
 - Information dissemination and interactive forums



The Core Group

- Follows consensus building approach
- Debates on “next steps” to implement various project components
- Transparent and objective approach for supporting activities, participation in cross-exchanges etc.
- Focus on obtaining tangible on-the-ground results
- Encouraging support to interested parties



IREDA's Catalytic Role

- ***IREDA scheme for EE from TA component:***
 - a. **Project monitoring and verification**
 - Development of M&V protocol
 - Post commissioning evaluation protocol
 - b. **Policy support initiative**
 - Consultants Directory
 - Preparation of Codes, Best practices Manual and Case Studies
 - Database of EE products
 - Investor Manual
 - c. **Energy Efficiency capacity building**
 - Training of project finance, promoters and other stake-holder
 - d. **Project Development Schemes**
 - Loan-linked grant schemes
 - e. **Market development initiative**
 - Cluster-based projects
 - f. **Support Commercial Banks for EE market development**



3CEE Project Experience

- **Development of loan schemes for energy efficiency/savings for SMEs by five commercial banks SBI, Canara Bank, UBI, BOB & BOI**
- **Development of EE Project Appraisal Manual for Bankers**
- **Designing of Financial Instruments and Structures for EE Project Financing**
- **Development of Bankable Pilot EE Projects in Pulp & Paper, Glass & Steel Sectors to attract Bank Finance**
- **Assessment of scope for Guarantee Fund and Equity Support**
- **Dissemination of Lessons Learnt**



EE Schemes of Banks

- Target Clientele:
 - Existing clients with satisfactory credit rating
- Eligibility:
 - Investment upto Rs 100 mn
 - Turnover upto Rs 1 billion
 - Energy Cost > 20% production cost
- Loan Amount:
 - 75% to 90% of project cost (project cost to include DPR, Energy Audit etc)
- Interest Rate: Normal to 1% below normal rate



Project Appraisal Manual For Bankers

Objective:

“To develop appraisal procedures and systems to meet the requirements of commercial banks in appraising EE projects”

Key Issues Addressed:

- ✧ Identifying gaps in the existing appraisal system for application on EE projects appraisal
- ✧ Developing appraisal methodology
- ✧ Designing of Standard Loan Application Form and Evaluation Matrix



Project Appraisal Manual For Bankers Contd...

• Outcome:

- Appraisal Manual
- Standard Loan Application Form
- Evaluation Matrix



Financial Structures for EE

● Objective:

“ To design suitable financial instruments/ structures to address the various risks in funding EE projects”

● Key Issues Addressed:

- High transaction cost in EE projects in comparison to other projects
- Reliability of standardised financial structures to different EE projects
- Risk mitigation measures
- Comfort to lenders for repayment

■ Outcome:

- Dissemination of Report to various Banks



Pilot Projects

◆ Sectoral Coverage:

- Steel Re-rolling
- Pulp & paper
- Glass

◆ Scope of Work:

- Selection of units in the cluster & identification EE measures
- Assessment of Techno-economic feasibility of various EE measures
- Finalizing suitable financial structures
- Preparing suitable Energy Baseline, and M&V protocols
- Assisting concerned SME's in raising debt finance



Pilot Projects (contd.)

- Total of eight SME's identified for pilot projects
- Key criteria for selection of EE interventions:
 - High replication potential
 - Attractive payback periods and IRR
- **Status of financing:**
 - 5 SME's obtained normal loans from SIDBI or their bankers
 - 2 SME's implemented identified EE measures with own funds
 - 1 SME did not implement the identified EE measures



Pilot Projects (contd.)

- Need to establish energy baseline and M&V protocol not felt in either case
- Major inferences:
 - High “leakage” even after detailed energy audit is carried out
 - No need to introduce complexities by insisting on energy baseline data and M&V protocols
 - Banks need to meet the SME’s requirements quickly irrespective of relationship



Equity Fund Support to ESCOs

● Present Status:

- ESCO's are often technology driven, with little or no legal / financial / accounting expertise in-house
- Performance contracts, M&V protocols etc. not tried for a large number of particular end-users
- Financial mechanisms tried thus far have come about largely with donor assistance
- Takes longtime to go through even small deals

● Basic requirements for a scalable ESCO business:

- Standardized and workable documentation for at least some end-user categories:
 - Performance contracts
 - M&V protocols
- A suite of standardized Financial mechanisms that provide comfort to all key stakeholders



Guarantee Fund

• The present reality:

- Most ESCO's not in a position to provide equity /raise debt
- Banks prefer lending to end-users for (even) ESCO projects on the strength of their balance sheet and the long-standing relationship.
- End-users prefer to engage ESCO's only when the EE project risk is perceived to be high

• Near-term role of Guarantee fund:

- To provide comfort to banks as they begin a new line of business
- To cover bank exposure to ESCO projects in general



Guarantee Fund

✦ Conclusion

- Guarantee fund would not directly contribute to the kick start of EE/ESCO lending by Indian Banking Sector
- Outcome of first few demonstration projects and volume of business of EE/ESCO would confirm requirement of guarantee fund
- Guarantee fund to address issue of credit risk when both credit and performance risk taken by ESCO



The Association

- 3CEE project catalyzed the creation of the Indian Council for Promotion of Energy Efficiency Business (ICPEEB) comprising ESCO's, EA's, EE equipment vendors, Energy managers, EE consultants, banks and FI's
- **ICPEEB's short-term action plan:**
 - Standardization of ESCO contracts, M&V protocols
 - Show-case ESCO projects
 - Create a database of ESCO projects
 - Policy analysis, research and advocacy through a regular dialogue with concerned GOI ministries
 - Coordination with BEE, PCRA, NPC, industry associations etc.
- **ICPEEB's long-term action plan:**
 - Incubation of ESCO's
 - New loan products for ESCO project financing
 - To pursue for making EE a priority sector for lending and Fiscal support



Information Dissemination



Manual on EE opportunities in selected SME industry segments

- SME Sectors covered:
 - Cement, ceramics, food-processing, foundry, leather, paper, pharmaceuticals, sugar, tea, textile
- Scope of Information presented:
 - Energy savings potential
 - Shelf of EE technologies
 - EE equipment suppliers
 - Government policies / incentives
- Major EE equipment covered:
 - Air compressors, centrifugal pumps, centrifugal fans, refrigeration and air-conditioning etc
- Key Findings:
 - EE potential in the selected SME segments is ~12% of demand
- Similar compilations on other segments (other SMEs, beyond SMEs) would be useful to bankers and other stakeholders



Workshops

● Key objectives:

- To enhance general awareness of the EE opportunity
- To appraise other stakeholders of overall progress in 3CEE project
- To share the learning from Brazil and China gained through cross-exchange meets
- To disseminate the findings of consultant reports / studies to a wider audience and invite feedback

● The modality:

- Interactive workshops in various cities (Bangalore, Delhi, Mumbai etc.)
- Cross-section of participants (banks / FI's, end-user industry / Industry associations, ESCO's / energy auditors / consultants, vendors etc.)
- Thematic discussion sessions, for instance on the following:
 - Bankers' issues and perspectives on suitable financial mechanisms for EE projects
 - Available EE project financing schemes
 - Contextual environment in Brazil and China
- Managed by 3CEE Secretariat plus selected Core Group members



Opportunities for Future Activities



The Indian EE Experience

● Before the 3CEE project began:

- Large industrial and commercial enterprises have become energy efficient
- SME's, municipal corporations, Government etc. have by-and-large still to adopt EE measures. The exceptions are:

● By end of the 3CEE project:

- Banks, whose core business is not EE, have begun to consider EE seriously for the first time (eg. five banks have EE schemes for SME's)
- ESCO's and Energy Auditors, whose prime interest is in increasing EE activity, have made very little real progress

Important to properly align stakeholder interests



Risk Analysis of EE / ESCO Projects

<i>End-use category</i>	<i>Major Risk</i>	<i>Risk Mitigation Solution</i>	<i>Financial Instrument</i>
Large Industrial or Commercial	Dynamic baseline	Proper M&V protocol	Loan
Industry (Small, Medium)	Dynamic baseline	Proper M&V protocol	Loan
Commercial (Small, Medium)	Collection mechanism	Structured payments	Line of credit
Residential	Collection mechanism	Structured payments	Line of credit
Government Building	Payment delays	Structured payments	Line of credit
Municipal Corporation	Savings quantification	Proper M&V	Loan



Engaging Banks

- Institute improvements in the marketing and operations of existing EE schemes targeted at SMEs:
 - Dedicated personnel, developing templates, advertisement campaign etc
- Have many more banks launch EE schemes targeted at SME's (at least banks that have branches near industrial clusters that serve SME clientele)



Engaging Banks / FIs

- Encouraging banks / FI's to set up similar EE schemes for other end-user categories:
 - Expanding scope of EE manual, and circulating widely within banks as well as target clientele
 - Other outreach programs (workshops etc.) to encourage interaction between banks, clientele and other stakeholders
- Encouraging banks to have a broader range of lending instruments:
 - Encouraging new instruments (eg. Conditional grant for an innovative EE technology)
 - For each financial mechanism, to have clearly defined collateral requirements / other ways to provide comfort to all players



Strengthening ESCO's

- ◆ Improving the image
- ◆ Enhance project development capability
- ◆ Reduce Project Implementation Risk
- ◆ Template project documentation
- ◆ Enhancing Financial creditworthiness of ESCO's in the interim period



Immediate Next Steps

• Support to banks that have launched EE schemes:

- Engage consultant to market EE schemes in selected geographies / clusters
- Facilitate interaction between banks, ESCO's / EA's and end-users for demonstration projects

• Support to ESCO's:

- Support to ICPEEB – for implementing some of it's short term action plans
- Towards instituting a transparent system of ESCO rating