

TERMS OF REFERENCE (TOR)
PROJECT DEVELOPMENT ACTIVITIES IN THE CLUSTERS
INDIA: FINANCING ENERGY EFFICIENCY AT MSMEs PROJECT (FEEMP)

Small Industries Development Bank of India (SIDBI) is seeking the services of a Consultant to provide Project Development Support for Resource Efficiency (Energy Efficiency (EE), Lean Manufacturing (LM) and Cleaner Production (CP)) in Micro, Small & Medium Enterprises (MSMEs) in various clusters covering Pharmaceutical, Pulp & Paper, Food Processing, Textile, Agro Products, Ceramic, Consumer Appliances, Forging, Foundry and Engineering, etc.

I. BACKGROUND

As a part of the Global Environment Facility (GEF) Programmatic Framework for Energy Efficiency (EE) – Small Industries Development Bank of India (SIDBI) along with Bureau of Energy Efficiency (BEE) are executing a World Bank project, viz. “Financing Energy Efficiency at MSMEs in India”. The objective of this project is **“to increase demand for energy efficiency investments in target MSME clusters and to build their capacity to access commercial finance.”**

The project initiatives so far have triggered implementation of EE suggested options by more than 650 MSMEs in various MSME clusters viz. Ankleshwar Chemical, Faridabad Mixed, Kolhapur Foundry, Pune Forging, Dehradun, Delhi-NCR, Ludhiana, Mumbai-Thane & Varanasi Mixed clusters. The project has evidenced: (i) improved awareness amongst the MSMEs about energy efficiency (ii) increased investment by the MSMEs in energy efficiency options which besides leading to significant amount of energy savings and GHG emissions reductions also have resulted in various other co-benefits by these MSMEs; and (iii) creation of valuable knowledge products and EE demonstration cases. It is now proposed to cover another around 350 MSMEs in few more energy intensive clusters located across India.

II. BRIEF ABOUT SIDBI’S ACTIVITIES IN PROMOTION & DEVELOPMENT OF ENERGY EFFICIENCY IN MSMEs

SIDBI was established on April 2, 1990 under an act of the Parliament. It is the principal financial institution for promotion, financing and development of MSMEs in India. Over the years, SIDBI has evolved as a one-stop institution to meet the various types of credit requirements of the MSME sector by offering specialized fund based and non-fund based financial products. In keeping with the spirit of innovation and entrepreneurship, SIDBI has also enlarged its bouquet of offerings over the years. One such emerging area is the financing of energy efficient, green technologies that also offers a tremendous opportunity for the banking sector.

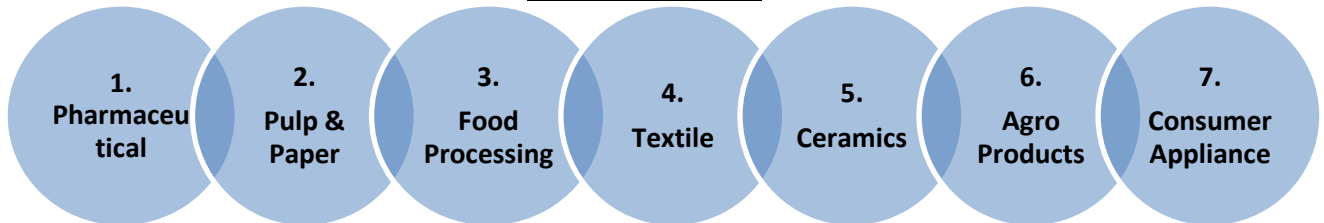
SIDBI is promoting sustainable development of MSME sector as it is key to the MSME sector’s survival and growth in future. In order to improve productivity and competitiveness of the MSME sector through EE measures in the production process, SIDBI scaled its EE financing by contracting bilateral Lines of Credit (LoC) from Japan International Cooperation Agency (JICA), KfW and AFD. SIDBI has also availed a World Bank LoC to promote Clean technologies, Environmental and Social (E&S) standards in the MSME sector. SIDBI has channelized loan assistance of more than USD 1 billion for energy efficiency and cleaner production projects in MSMEs. Further, besides this WB-GEF Project, SIDBI is also actively engaged in implementing a number of developmental initiatives like End-to-End Energy Efficiency (4E) Programme, Partial Risk Sharing Facility (PRSF) Project, etc.

III. OBJECTIVES OF THE ASSIGNMENT

The objectives of this assignment are as under:

- (i) To conduct awareness workshops
- (ii) To conduct Detailed Energy Audits in MSME units and prepare IGDPs
- (iii) To provide implementation support to MSME units. The implementation support shall include support for vendor identification, finalization and all technical support during project commissioning, etc.

Indicative Sectors



Following sectors are combined to form five (5) packages at various locations across India depending upon the requirements. Not more than two packages shall be awarded to one Consultant agency **(There may be changes in final packages and cluster locations at RfP stage).**

Clusters	Locations	Sectors
Cluster-1	Surat, Ahmedabad, Vapi & Valsad	Paper, Textile, Chemical, Pharma & Engineering
Cluster-2	Panipat, Kundli & Rai	Food Processing, Cold Storages, Textile, Agro & Engineering
Cluster-3	Ludhiana, Jalandhar & Chandigarh	Textile, Auto, Agro, Consumer Appliances, General Engineering, Plastic, Auto etc.
Cluster-4	Morbi & Rajkot	Ceramic, Foundry, Forging, Auto etc.
Cluster-5	Coimbatore, Erode, Virudachalam & Tirupur	Paper, Ceramic, Textile & Engineering

IV. MAJOR KEY ACTIVITIES TO BE UNDERTAKEN BY SELECTED CONSULTANTS IN EACH CLUSTER PACKAGE

(A) Action based sensitization awareness workshops (ASAW) – 3 Nos.

- The consultant shall conduct atleast 3 workshops in each cluster package with minimum 30 MSME participants in each workshop
- The objective of these workshops is to motivate MSMEs & Industry Associations for participation under the project.
- First workshop would be conducted during project inception stage
- Other workshops shall be conducted based on project status at various stages
- The consultant shall develop project brochures atleast 500 copies per cluster and out of which, 100 copies shall be submitted to SIDBI & 100 copies to BEE and remaining 300 copies shall be distributed amongst MSMEs, Industry Associations etc. during workshops and meetings.

(B) Investment Grade Detailed Project Report (IGDPR) – 70 IGDPRs

- Consultant shall conduct Detailed Audits (DA) in MSMEs where desirable EE Investment, Energy and Cost Savings, Emission Reduction can be achieved.
- IGDPR should document expected environmental co-benefits including emission reduction, water savings, waste minimization, SO_x, NO_x, Health & Safety Improvements, etc. in terms of quality & quantity
- The Consultant shall also be covering Lean Manufacturing (LM) and Cleaner Production (CP) potential areas
- 70 IGDPRs shall be submitted to SIDBI by Consultant in given formats covering EE, LM & CP

(C) Implementation Completion Report (ICR) – 50 ICRs

- Consultant shall provide handholding support for implementation of accepted improvement measures to atleast 50 MSMEs
- 50 ICRs shall be submitted to SIDBI by Consultant in given formats covering EE, LM and CP

(D) Case Studies – 3 Nos. / sector

- Sector specific – technology based case studies shall be prepared by the consultants.
- 3 case studies for each sector shall be developed.

(E) Cluster based consolidated reports and detailed presentations

- Consultant shall prepare cluster based consolidated reports
- Develop sector specific presentations for each sector and cluster as a whole

The above mentioned number of Action based Awareness Workshops (AAW), Investment Grade Detailed Project Report (IGDPR) and Implementations Completion Reports (ICRs), Case Studies are minimum number to be achieved. However, if the minimum number of ICR target is not achieved then SIDBI reserves the right to ask for more numbers of IGDPRs to be prepared by the Consultants at their own cost.

V. REPORT ACCEPTANCE CRITERIA

Acceptance Criteria	Unit	Per IGDPR	Implementation (ICR)
EE Investment	INR Lakh	30 (Atleast Recommended)	30 (Average Implemented)
Emission Reduction	tCO ₂ / Year	300 (Atleast Recommended)	300 (Average Implemented)

- IGDPRs and ICRs shall not be accepted until and unless both the above acceptance criteria are met.
- SIDBI will support the implementations by providing interest subvention under 4E program to 1/3rd of the total units targeted¹.
- IGDPR should document expected environmental co-benefits including emission reduction, water savings, waste minimization, SO_x, NO_x, Health & Safety Improvements, etc. in terms of quality & quantity

¹ The term loans may be provided on first cum first served basis subjected to meeting the eligibility criteria and fund availability.

VI. PARTICIPATION FOR MSME UNITS UNDER THE PROJECT

Broad selection criteria for MSME units under the programme are given as under:

- MSME units shall pay a participation fee under the project. Besides the amount covered under this contract, the consultant shall be allowed to charge an amount not exceeding INR 30,000/- directly from the MSME units as participation fee under the project and a copy of payment details shall also be provided to SIDBI by the consultant. The consultant shall enter into a separate contract with each of the MSME unit and shall submit signed copy of the same to SIDBI. However, SIDBI shall not be liable to the consultant or to the MSME unit in this regard in any manner.
- MSME unit as per MSME definition under MSMED Act 2006
- Significant potential for Energy Efficiency Investment, Energy Savings and CO₂ Emission Reduction is possible
- Willingness for Implementation of measures suggested in IG DPR
- Complying the Environment & Social Management Framework (ESMF) prescribed by SIDBI for the project

VII. REPORT PREPARATION & SUBMISSIONS

After conducting the study on Detailed Energy Audits (DEA), Lean Manufacturing (LM) and Cleaner Production (CP) areas in targeted MSME units, the Consultant shall prepare the unit specific Investment Grade Detailed Project Reports (IG DPRs) which will cover three (3) parts as given below:

PART- A: Energy Efficiency aspects

PART- B: Lean Manufacturing aspects

PART- C: Cleaner Production aspects

VIII. MAJOR SCOPE OF WORK FOR DEA, LM & CP STUDIES

The major scope of work for DEA, LM & CP shall include but not be limited to the following:

(A) Action Based Sensitization Awareness Workshops (ASAW)

- The consultant shall conduct atleast 3 workshops in each cluster package with minimum 30 MSME participants in each workshop
- The objective of these workshops is to motivate MSMEs and Industry Associations for participation under the project.
- First workshop would be conducted during project inception stage
- Other workshops shall be conducted based on project status at various stages
- The consultant shall develop project brochures and disseminate the printed version amongst MSMEs, SIDBI, BEE, The World Bank, Industry Associations etc.

(B) Detailed Energy Audit, IG DPR, Implementation Support,

- The consultant shall select the MSME units in consultation with SIDBI for conducting Detailed Energy Audits.
- The consultant shall prepare atleast 70 unit specific Investment Grade Detailed Project Reports (IG DPRs) subject to the final acceptance of IG DPRs by SIDBI.
- The consultant shall provide implementation support and ensure implementation of recommended EE measures to at least 50 MSME units per cluster.
- The detailed scope of work for conducting detailed energy audit in the identified MSME units would include but not limited to the following:

- To correlate monthly production data with the electricity, fuel consumption for a period of minimum 12 months of normal operation for individual section and overall system.
- To measure the present efficiency levels, specific energy consumption and identify the energy saving opportunities in all major energy consuming equipments and other process related utilities.
- To study monthly power factor, maximum demand, working hours, load factor, Harmonics level, capacitor's health checkup etc. and also to study monthly electricity consumption and establish scope for possible optimization.
- To study the current lighting load and the recommend possible energy saving opportunities.
- To undertake renewable energy application assessment study
- Development of overall energy flow diagram
- Development of process flow diagram
- Development of single line diagram (SLD)
- Review the present metering and monitoring
- Review the present energy management processes and system and recommend improvement measures for better monitoring and consequent energy savings

(C) Study on Lean Manufacturing, improvement areas with cost benefit analysis and Implementation Support,

- The basic rationale for undertaking lean manufacturing (LM) is to enhance productivity and competitiveness of MSMEs by reduction of wastages in manufacturing processes, inventory management, space management, etc. The LM techniques may also result in reduction in rejection, standardization of processes, better layout of machines resulting in reduced transportation of products during manufacturing, etc. The implementation of LM techniques may lead to cost reduction for MSMEs.
- The consultant shall undertake a detailed assessment of the plant layout and processes to identify possible improvement areas through suitable LM techniques. The consultant shall also provide support to the unit for implementation of the identified LM techniques to the extent feasible within the scope of the project and given timelines.

(D) Study on Cleaner Production, improvement areas with cost benefit analysis, and Implementation Support,

- Based on the data collected like site layouts and plans, environmental data, inventories of raw materials and products, and the site visit: define the sources, quantities and types of waste generated through material and energy balances.
- A general flow diagram showing all process steps that are carried out and flow diagram for each key process should be constructed. This should identify all main steps that are carried out, list all of the inputs (including raw materials, process chemicals, steam, water and energy, etc.), outputs (products, byproducts, solid, liquid and gaseous emissions), and any recycling steps.
- The values derived for resource consumption and wastes generation should be compared to national (where they exist) and international benchmarks for each specific industry.

- Identify cleaner production opportunities and assess costs & benefits of each recommended measure. This assessment should cover technical feasibility (effect on production, availability of technology & suppliers, any perceived risks, etc), financial viability (investment required, operation & maintenance costs, economic savings, etc), and expected environmental benefits (GHGs emissions reductions, water savings, etc).
- Prioritise the cleaner production opportunities identified. In general, high priority should be given to measures with relatively short pay-back periods and significant environmental benefits.
- Set-up an Action Plan that would describe briefly the recommended measures, technical specifications/suppliers, determination of responsibilities, the required investment, and the expected time schedule for the prioritized opportunities to be implemented.
- Review water system for the unit.
- Water Balance analysis
- Review use of process wastes (including process effluents) as by-products or in waste-to-energy projects.
- Review possibility to recover or recycle energy or water

After conducting all three above mentioned 'A', 'B' & 'C' activities in the identified MSME units, the consultant shall prepare the investment grade detailed project reports (IGDPRs). The IGDPRs shall include the basic data about the unit, baseline, technical details of suggested improvement measures assessment of GHG reductions and other benefits, financial projections, implementation schedule, etc. The IGDPR shall be prepared in three separate sections for each of the activities 'A', 'B' & 'C'. The Consultants shall also provide suitable M&V Protocol for each recommended Measure.

The IGDPRs shall also highlight the cost-benefit analysis pertaining to the recommendations made with regard to the various improvement options as may be proposed for each MSME. The IGDPRs shall be structured keeping in view their acceptability to lending institutions for the purpose of loans as may be required by the concerned MSMEs. The consultant shall get the IGDPR accepted by the concerned unit before submitting to SIDBI. Further, it shall also obtain its consent for implementing the measures proposed in the IGDPR and also for participation in the Measurement and Verification (M&V) exercise after implementation of the recommendations of IGDPRs.

The Consultant shall also facilitate for arranging the loans by MSME units from local banks / FIs, if so required and desired by the individual MSME units.

The Consultant shall provide implementation assistance for the MSME units in the cluster implementing the recommendations in the IGDPRs prepared by the consultant. This may include release of request for bid, evaluation of bids & finalization of vendor, cost implications and financial arrangements, preparation of implementation plan, supervising erection and commissioning activities, training to operators, if so desired, etc.

The consultant shall submit Progress Reports on monthly basis to SIDBI on the status of the project activities. The template of IGDPR, Implementation Completion Report (ICR), Workshop completion Report, Cluster based reports, final report and Progress Report shall be finalized in consultation with SIDBI.

The consultant shall provide handholding support to participating MSME units for implementing various EE, LM and CP measures identified in IGDRP. The support to MSME units may include finalization of technical specifications, identification of suitable vendors/suppliers, preparation of implementation plans, supervising erection and commissioning activities, preparation of Standard Operating Procedures (SOPs) etc as already provided above.

The consultant shall provide technical inputs to the MSME units for any statutory approval for implementing the measures identified in the IGDRP.

The consultant shall ensure for establishment of online Energy Monitoring System by MSME for implemented measures.

The consultant shall provide technical inputs to the MSME units in arranging loans from local banks / FIs to implement the identified measures in IGDRP.

The Consultant shall also develop a suitable mechanism for collection of Monitoring & Verification (M&V) data including Environment and Social (E&S) impact and record above mentioned environmental, health, social & safety co-benefits achieved due to implementations.

IX. ADDITIONAL INCENTIVE FOR CONSULTANTS

- Minimum 16% of total targeted implementations in each cluster i.e. 8 MSME units shall be supported for implementing the EE measures on ESCO mode (Shared / Guaranteed savings).
- If 50% of the accepted investments are implemented on ESCO mode by 8 or more MSME units, then the Consultants shall be paid additional incentive, i.e., double the implementation support cost for all these MSME units.
- In case, the target of 8 MSME units is not met then the Consultants shall not be paid for the cost of implementation support for these MSME units.

X. REVOLVING FUND TO PROMOTE ENERGY EFFICIENCY

- SIDBI has created a revolving fund to cater to the financial needs of MSME units on softer terms to implement energy efficiency projects based on findings of detailed energy audits.
- The participating MSMEs can avail loan facilities under the revolving fund depending upon the eligibility criteria defined from time to time.

XI. GENERAL

While carrying out the above activities, the Consultant shall comply with the following:

- The Consultant shall have a project office at cluster location to interact on day to day activities with MSMEs as well as SIDBI/BEE PMU.
- The Consultant shall depute at least one (1) Certified Energy Auditor along with two (2) experienced engineering graduates at project office for entire project period in the cluster location.
- The Consultant shall contact with SIDBI and BEE as and when required.
- The Consultant shall participate in meetings as and when called by SIDBI and BEE.
- All costs incurred in carrying out various activities as envisaged in this Terms of Reference (ToR) shall be borne by the Consultant.

- Consultants may associate with other firms / agencies/ organizations in the form of a joint venture or a sub-consultant to enhance their qualifications.
- Submission of photographs of existing areas / equipments wherever improvement measures are suggested for implementations covering EE, LM and CP to SIDBI in CD and same shall also be incorporated in the IG DPRs at relevant sections.
- Submission of small video clips (taken through Mobile/Camera) for pre & post Implementations of suggested measures to SIDBI in a CD.
- The Consultant shall follow the tentative schedule as given in the Table below for submission of all deliverables but the Consultant can also offer revised schedule in consultation with SIDBI as per contract duration.

Activities / Quarter	Q1	Q2	Q3	Q4	Q5	Q6
Workshops	1st		2nd		3rd	
Project Brochure	500 copies					
IG DPR		In at least 70 MSMEs				
ICR			In 50 MSMEs			
CS ¹						20 Case Studies
Cluster based reports						
Final Report						1 Final Report

Note: Q1...Q6: Quarter; ¹ Case Study

XII. SHORT LISTING QUALIFICATION CRITERIA

- Minimum five years of experience of the firm in the field of Energy Efficiency / Lean Manufacturing / Cleaner Production.
- The firm should have technically qualified and experienced staff having hands-on expertise in conducting Energy audits, implementing energy efficiency projects, energy measurement & verification protocols, lean manufacturing studies, and cleaner production studies in MSMEs.
- Firm expressing interest should have an average annual turnover of INR 50 Lakh or more in any of last three financial years. The firm shall submit audited balance sheet for the same.
- Working experience of Resource Efficiency projects with multilateral / bilateral agencies like World Bank, UNIDO, UNDP, ADB etc. of similar nature will be given an added advantage.
- Consultants shall be given added advantage for having experience in working in End-to-End Energy Efficiency (4E) Programme.

The top 6 firms ranked in accordance with the below mentioned criteria will be shortlisted for each package.

S.N.	Short-listing Criteria	Marks
1	Experience of firm in the field of EE / LM / CP – 5 years or more	30
2	Experience technical staff	30
a	<i>Educational Qualifications (Science/Engineering/ Technical and/or other related disciplines)</i>	10
b	<i>Experience in similar projects (including conducting energy audit, lean Manufacturing & Cleaner Production and preparation of bankable DPR etc.)</i>	20
3	Firm Turnover of INR 50 Lakh or more in any of last three financial years	25

4	Experience of EE, LM, CP with multilateral / bilateral agencies	5
5	Experience of 4E Programme of SIDBI	5
6	Experience of ESCO Projects	5
	Total	100

- The experience and expertise in specific industry / sector / cluster, and performance contracting would be preferred and firms will be shortlisted packages / cluster wise for issue of Request for Proposal (RfP) at a later stage. Consultants may associate with each other to enhance their qualifications, local tie-ups shall be encouraged.
- The Consultants may propose the team members as relevant to their proposals. All the team members proposed for the assignment need to be available for the entire duration of the assignment and locations.
- A Consultant will be selected in accordance with the Quality and Cost Based Selection (QCBS) method as per World Bank Procurement guidelines.
- The firm can show interest in one or more cluster packages. However, not more than two cluster packages shall be awarded to any firm.

XIII. DURATION OF CONTRACT

- The duration of the contract shall be 18 months from the date of contract to complete all above mentioned deliverables.

Interested consultants are requested to submit their EOI separately for each package in sealed envelope signed by an authorised signatory.

A. Organizational details and area of work/operation:

1	Name of the organization	
2	Act under which the Firm/Resource Organization is registered, if any: (NGO/Company/PSU/Society, etc.)	
3	Registration Number & Date of Registration, if any (please attached copy of incorporation and Memorandum of Association & Article of Association):	
4	Information Required for Statistical Purposes Only <ul style="list-style-type: none"> • Country of Registration (Companies) • Number of Employees (as appropriate) 	
5	Date of commencement of work:	
6	Major area of work/operation.	
7	Core business of the firm including the business model (Commercial, Not-for-Profit, NGO, etc.)	
8	Technical and Managerial organization of the firm (including the locations and size of establishments in India)	
9	Communication Address with email and phone/fax numbers:	
10	Contact Person:	
11	Turnover of the firm for the last three years (in Rs.) This should be certified by concerned Chartered Accountant of the firm as per format given <u>Annexure-I</u>. 2015-16 2014-15 2013- 14 (* in Indian Rupees)	

- B. Provide a brief description about of your Organization as relevant to this assignment and a self-assessment note with justification how the firm is capable for this assignment? **Further, please provide your preference of packages as mention below table, only if applying for more than two (02) packages:**

SN	Title of Package	Location	Sector	Preference (Please indicate in scale of 1 to 5)*
1	Cluster-1	Surat, Ahmedabad, Vapi & Valsad	Paper, Textile, Chemical, Pharma & Engineering	
2	Cluster-2	Panipat, Kundli & Rai	Food Processing, Cold Storages, Textile, Agro & Engineering	
3	Cluster-3	Ludhiana, Jalandhar & Chandigarh	Textile, Auto, Agro, Consumer Appliances, General Engineering, Plastic, Auto etc.	
4	Cluster-4	Morbi & Rajkot	Ceramic, Foundry, Forging, Auto etc.	
5	Cluster-5	Coimbatore, Erode, Virudachalam & Tirupur	Paper, Ceramic, Textile & Engineering	
* (1 is taken as higher and subsequently 5 to be consider as lower preference)				

- C. Understanding and proposed approach to the **PROJECT DEVELOPMENT ACTIVITIES IN THE CLUSTERS APPLIED FOR.** (One/Two Page)
- D. Provide detail summary of working experience of Resource Efficiency projects with multilateral / bilateral agencies like World Bank, UNIDO, UNDP, ADB etc. of similar nature.

Name of the Project	Period (From – To)	Country, State	Value (In Rupees)	Details of Client	Lead Firm/Organiz ation	Short Description of the Project

- E. Provide detail summary of major projects and assignments undertaken since last five years in the field of Energy Efficiency / Lean Manufacturing / Cleaner Production / End-to-End Energy Efficiency (4E) Programme.

Name of the Project	Period (From To)	Country, State	Value (In Rupees)	Details of Client	Lead Firm/Organization	Short Description of the Project

- F. Please provide the information as per below Table, in respect of key personnel, who would be expected to provide the services during the contract period.

Name of key personnel	Educational qualification	Experience relevant to the project and project specific area.	Language Known	Remarks

Annexure-I

ANNUAL TURN OVER STATEMENT

The Annual Turnover of _____ (Name of the Firm/Resource organization) _____
for the last three years are given below and certified that the statement is true
and correct.

	Sl.No.	Financial Year	Turnover in Lakhs (Rs)
1.		2015-16	
2.		2014-15	
3.		2013- 14	
Total -			Rs. _____ Lakhs.

Average turnover for last three years - Rs. _____ Lakhs.

Date:

Seal:

Signature of Auditor/
Chartered Accountant
(Name in Capital)