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# **CAPACITY BUILDING OF LOCAL SERVICE PROVIDERS (LSP) UNDER GEF-UNIDO-BEE PROJECT “PROMOTING EE/RE IN SELECTED MSME CLUSTERS IN INDIA”**

## **Training Need Assessment Report- Sikkim Dairy Cluster**

Submitted to  
(Prepared under GEF-UNIDO-BEE Project)



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## 1. PROJECT BACKGROUND

Bureau of Energy Efficiency (BEE), a statutory body under Ministry of Power, Government of India, in collaboration with United Nations Industrial Development Organization (UNIDO) is executing a Global Environment Facility (GEF) funded national project “Promoting energy efficiency and renewable energy in selected MSME clusters in India”.

The overall aim of the project is to develop and promote a market environment for introducing energy efficiency and enhanced use of renewable energy technologies in process applications in 12 selected energy-intensive MSME clusters across 5 sectors in India (with expansion to more clusters later). This will enable improvement in the productivity and competitiveness of units, as well as reduce overall carbon emissions and improve the local environment.

The details of the sectors and clusters identified is as below

Table 1 : List of clusters identified

Sector	Cluster
<b>Brass</b>	Jamnagar, Gujarat
<b>Ceramics</b>	Khurja, Uttar Pradesh
	Morbi, Gujarat
	Thangadh, Gujarat
<b>Dairy</b>	Gujarat
	Maharashtra
	Sikkim
<b>Foundry</b>	Belgaum, Sikkim
	Coimbatore, Tamil Nadu
	Indore, Madhya Pradesh
<b>Hand tools</b>	Jalandhar, Punjab
	Nagaur, Rajasthan

CONFEDERATION OF INDIAN INDUSTRY – CII Sohrabji Godrej Green Business Centre has been engaged by Bureau of Energy Efficiency to carry out the assignment on “Capacity building of Local service providers (LSPs) under GEF-UNIDO-BEE project **“Promoting Energy Efficiency and Renewable energy in selected MSME clusters in India”** for the Dairy cluster of Sikkim.

## 2. TRAINING NEED ASSESSMENT

### 2.1 Objective of Assessment

The main objective of this assessment is to identify the gaps of Local Service Providers in the cluster in terms of skill set, technical knowledge and organizational strength. This analysis will help in maintaining a sustainable market linkage for the promotion of EE/RE technologies. There are various stake holders involved in the project which is depicted in the below figure:-

Out of this various stake holders the assessment was carried out in

- Local Service Providers
- Local Industrial Units

Training need analysis provide necessary knowledge and information on training and skill development requirement of LSPs and plant employees in the cluster. This information will help in the preparation of a good training strategy that can boost the knowledge and skill set on latest EE/RE technologies and their applications. Training need assessment is important for these reasons:-



Figure 1: Project Stake holders

- Increasing awareness among units for taking good quality services.
- LSPs are unaware of the rapid technological advancement in EE/RE technologies.
- Employees play a key role in making a plant energy efficient, so plants management are ready to spend resources for the training and development of their employees on latest trends in technologies.

### 2.2 Goals of Training Need Analysis

The main objective of training need assessment was to determine whether a training need exists and if it does, what type of training was required to fill the gap. The expectation of knowledge, skills sets and abilities of officials at different levels was different so there training needs were also different.

## Training Need Assessment Report

The training need assessment survey will identify the knowledge, skills and abilities needed to achieve those goals by minimizing the existing gaps which in turn enhance the productivity and thereby ensuring good quality products and services. The main focus should be on collective need that can add value to the overall competitiveness of the cluster. This will help in:-

- Ensuring healthy competition
- Creating sustainable market environment
- Production improvements
- Staff development

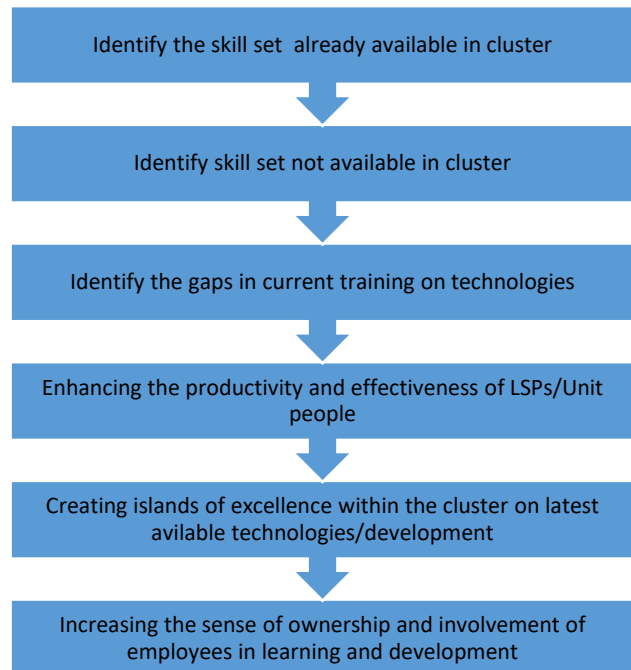
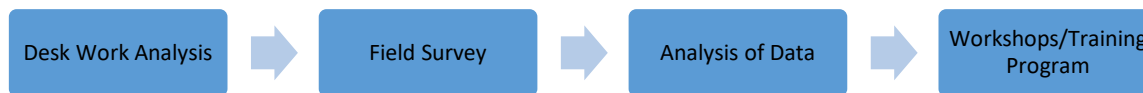


Figure 2: Objective of training need assessment

### 3. METHODOLOGY FOR ASSESSMENT

The entire activity was done in 3 phases



#### 3.1 Desk Work Analysis

This phase mainly consists of data collection and development of questionnaire to understand the needs of the cluster. In Sikkim dairy cluster only few LSPs operate from Sikkim as there are only two dairy units. Most of the LSPs are operating from outside Sikkim. In the mapping procedure LSPs are classified based on the technology provided, location served and on skill set. A training need assessment questionnaire has been developed to capture the information as shown below:-

Table 2: Training need assessment questionnaire

LSP Data Collection Form for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	
Address	
Contact Person Name	
Designation	
Mobile No	
Email ID	
No of years in existence	
No of employees working	
Technology/service provided	
Name of unit served by LSP	
Existing skill set of employees	
Areas in which training required	

The questionnaire consists of mainly 2 components

- General Information – includes questions regarding type of company, name, year of existence etc.
- Specific Information – Identify the existing knowledge and skill set ,to understand the type of challenges faced by LSPs and new areas of learning required by the LSPs/ Industries

The preliminary desk work helped in understanding the size of LSPs and what service they provide.

### 3.2 Field Survey

In this phase detailed discussions happened with LSPs and dairy units in the form of a structured interviews and these meetings helped us in understanding the perceptions of different stakeholders in terms of training needs, what are the areas of improvement, various gaps that exists in terms of technology/services .The survey was conducted for only 6 LSPs which include contractors hired the dairy for regular O&M activities and two dairy units. The table below shows the activities of field survey.

Table 3: Activities of field survey

Field Survey	
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Understanding the organization</li> <li>• Interviewing LSPs and key personnel’s of Dairy Units</li> <li>• Collecting Information (General and Specific )</li> <li>• Identifying the gaps that exists</li> </ul>
<b>Purpose</b>	The primarily focus was on performance related issues that are directly concerned with training needs or any other issues influencing their performance. This helped in establishing a baseline for the training program
<b>Outcome</b>	<ul style="list-style-type: none"> <li>• Identified training needs for individuals</li> <li>• Supporting evidence of the performance problem these training needs will address.</li> <li>• Identified non-training needs that may significantly influence performance</li> <li>• Able to identify the technological gaps</li> </ul>

The following table shows an analysis of the outcome of the interaction had with various local service providers and dairy employees in the cluster.

Table 4: Outcome of TNA

Meeting with Local Service Providers
<ul style="list-style-type: none"> <li>• Few LSPs are operating from Sikkim because of only 2 dairy plants. These LSPs are mainly their contract staff and vendors providing electrical /instrumentation service.</li> <li>• All the LSPs located outside Sikkim are not willing to establish a base in Sikkim due to limited business opportunity</li> <li>• Local contractors and vendors serving to Sikkim dairy are educationally qualified but have limited knowledge/skill set in terms of energy efficient practices</li> <li>• LSPs in Sikkim have less exposure to various training programs /seminars in terms of EE/RE</li> </ul>
Meeting with Industrial Units
<ul style="list-style-type: none"> <li>• Two dairy units has inhouse people for the regular maintenance activities and also they have hired an external contractor for the overall activities</li> <li>• The employees of the plant are unaware of the best operating practices to be followed and energy efficient measures to be implemented for improving EE.</li> <li>• Training should focus on EE/RE technologies with practical sessions as well as on safety aspects related to Refrigeration and electrical</li> <li>• Association wants a local resource from their OEM based at Gangtok for the regular O&amp;M activities in Refrigeration system</li> </ul>

### 3.3 Analysis of Data

After conducting the field questionnaire survey to few local service providers, dairy units, the data from various sources were analyzed to identify the areas of improvement, target group specific training needs and preferred training delivery mechanisms. A sample data collection sheet from one of the LSPs is attached below. Detailed list of survey forms is attached in Annexure 1.

LSP Data Collection Format for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	Sambhu Sambhu Sarkar
Address	Tadong, Gangtok
Contact Person Name	Sambhu Sarkar
Designation	
Mobile No	9851282828
Email ID	
No of years in existence	24 years
No of Employees currently working	1
Technology/ Service Provided	→ Motor Rewinding → Electrical wiring → Maintenance
Name of the Units served by the LSP	SNU, private units
Existing Skills of the employee	→ Motor Rewinding → Electrical wiring Based on experience
Areas in which training is required	→ VFD maintenance
Signature	

Figure 3 : Filled in questionnaire

By analyzing the various data collected from LSPs and dairy units, following inferences were made:-



## Training Need Assessment Report

- Most of the LSPs are single owned or have maximum 3 to 4 employees. The knowledge/ skill set of these LSPs are poor as they are small contractor working for these two plants over the last 5 to 10 years.
- The LSPs and dairy units are unaware of the latest trends and developments in EE/RE technologies.
- All the major overhauling and maintenance activities of critical and major equipment's in process and utility are carried out by service engineers from all over India for different technologies.
- Limited opportunities for LSPs and dairy units to attend training programs/ seminars on EE/RE
- Focus should be given more on industrial safety aspects like safety precautions in Ammonia Refrigeration system .The training program should have more practical sessions than theory which will communicate things faster
- There was a good response from the cluster on training on Boiler and Steam system especially on specific topics like condensate recovery, blow down etc.
- Electrical system was another topic which was selected by units and local service providers in the cluster. Most of the stakeholders were interested on energy efficient motors, harmonics mitigation, power factor improvement and electrical safety.
- In utility section, most of the stakeholders in the cluster were interested in training on best operating practices along with case studies and various factors that should be considered before purchasing a pump/compressor

### 3.4 Training workshops

After the identification of training needs, the topics for the programs should be designed in such a way that the training plan caters the priorities of a wide range of stakeholder's mainly local service providers, dairy unit employees and other companies such as pharma, food processing etc. After consultation with the main stake holders in the cluster and based on the survey results some of the key topics identified shown in Figure 8. Others include renewable energy, waste heat recovery, process optimization, evaporative condenser etc.

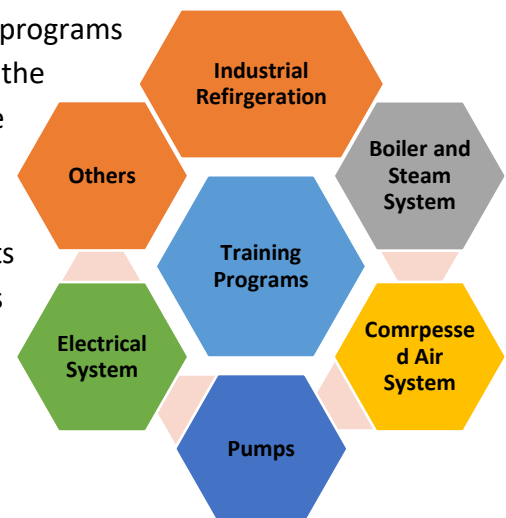


Figure 4: Identified training modules

## Training Need Assessment Report

As a part of the training need assessment, specific training modules will be prepared for the cluster which will cover:-

- Basics of the technology
- Best Practices and Case studies
- Specific benchmarking figures
- Latest advancements in technology on energy efficiency
- Safety guidelines for efficient operation
- Infographics and pictures

The training materials will be based on internationally available training courses and on locally developed case studies such that it can be adopted by all the stake holders in the cluster. Some of the possible modalities for facilitating training is shown below:-

- Class room training
- Plant visits
- Training videos
- Training manuals/pamphlets

The table below shows the schedule of the various training programs in Sikkim Dairy Cluster

Table 5: Training Program schedule

Dates	Location	Theme	Target Audience	No of Participants
11-May-18	Gangtok	Electrical & Utilities, Thermal Utilities, Refrigeration System & Renewable	Electrical/Mechanical Maintenance Operator/Technicians , local dealers, technology providers, Pharma companies, food processing companies	25
25-May-18	Gangtok			

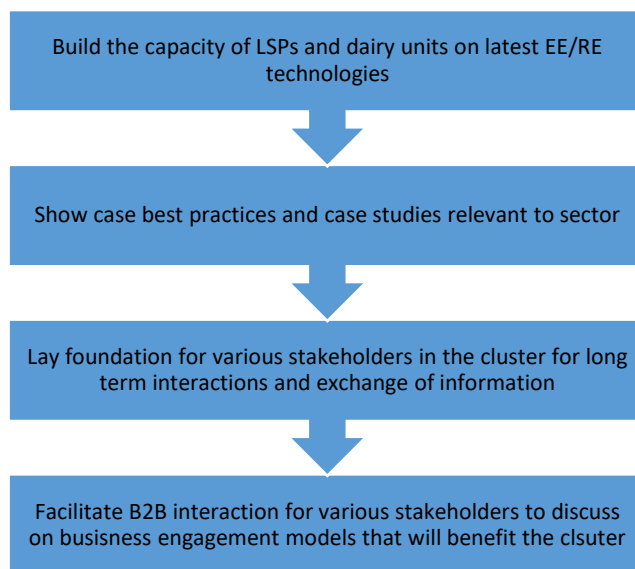


Figure 5: Objective of training program

## 4. CONCLUSION

Training need analysis conducted for various stakeholders in the cluster helped in identifying the gaps and methods to bridge the same. It also identified various training needs and what model can be developed for preparation of cluster specific modules can be the appropriate modules for each target group.

Only few LSPs are there in Sikkim for the regular maintenance activities, all the major overhauling and maintenance activities of critical equipment's in process and utility are carried out by service engineers from all over India

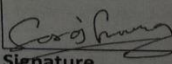
Limited opportunities for LSPs and dairy units to attend training programs/ seminars on EE/RE. The training program will be designed in such a way it would cater the needs of other sectors like pharma, food processing etc

Detailed course content would cover relevant case studies and best operating practices that would benefit the various stakeholders in the cluster. Training should also focus on EE/RE technologies with practical sessions as well as on safety aspects related to Refrigeration and electrical.

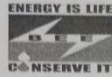
Survey results showed most of the stakeholders are interested in getting trained on Industrial Refrigeration, Boiler/Steam Systems and Electrical System

## 5. ANNEXURE

### Annexure 1 – LSP Training Need Assessment Questionnaire

LSP Data Collection Format for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	Gasoj Gurung
Address	Jorethang Kactoe Sikkim Milk
Contact Person Name	
Designation	Electrician
Mobile No	8617853547
Email ID	
No of years in existence	(5) five years
No of Employees currently working	1
Technology/ Service Provided	Boiler operation DG set operation Compressor operation
Name of the Units served by the LSP	Jorethang Unit
Existing Skills of the employee	I.T.I.
Areas in which training is required	Boiler operation DG set operation Compressor operation
Signature	

# Training Need Assessment Report



## LSP Data Collection Format for Sikkim Dairy Cluster

Name of the Local Service Provider(LSP)	Hussain
Address	Hoving Wolong, Gangtok
Contact Person Name	Hussain
Designation	—
Mobile No	7584972918
Email ID	—
No of years in existence	7
No of Employees currently working	1
Technology/ Service Provided	<ul style="list-style-type: none"> <li>→ boiler pipeline fixing</li> <li>→ welding for joints</li> <li>→ unit &amp; tube fixing</li> </ul>
Name of the Units served by the LSP	SMU HO unit Gangtok
Existing Skills of the employee	<p>Maintenance</p> <ul style="list-style-type: none"> <li>→ steam &amp; welding</li> </ul>
Areas in which training is required	<ul style="list-style-type: none"> <li>→ boiler function</li> <li>→ steam pipeline</li> <li>→ Application in Dairy cluster</li> </ul>

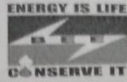
Signature

# Training Need Assessment Report

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LSP Data Collection Format for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	Napendra Singh
Address	Hossing Colony, Gangtok
Contact Person Name	Napendra Singh
Designation	-
Mobile No	9932351015
Email ID	-
No of years in existence	30
No of Employees currently working	1
Technology/ Service Provided	<ul style="list-style-type: none"> <li>→ Boiler pipeline fixing</li> <li>→ welding for joints</li> <li>→ Cement &amp; tile fixing.</li> </ul>
Name of the Units served by the LSP	SMU HO unit Gangtok
Existing Skills of the employee	maintenance
Areas in which training is required	<ul style="list-style-type: none"> <li>→ welding</li> <li>→ steam system and boiler</li> </ul>
Signature	

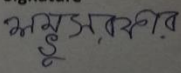
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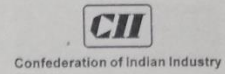
**LSP Data Collection Format for Sikkim Dairy Cluster**

Name of the Local Service Provider(LSP)	Dilip Singh
Address	Karfectar, Jorethang South Sikkim
Contact Person Name	
Designation	Sr. Fitter
Mobile No	9593988382
Email ID	
No of years in existence	(12) Twelve years
No of Employees currently working	1
Technology/ Service Provided	Boiler operation D.G set operation Ammonia Compressor
Name of the Units served by the LSP	Jorethang Karfectar Sikkim Milk Union
Existing Skills of the employee	Based on Experience
Areas in which training is required	Boiler Operation D.G Set Operation Ammonia Compressor Operation
Signature	

LSP Data Collection Format for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	Shambhu Shambhu Sarkar
Address	Tadlong, Gangtok
Contact Person Name	Shambhu Sarkar
Designation	—
Mobile No	9851282828
Email ID	—
No of years in existence	24 years
No of Employees currently working	1
Technology/ Service Provided	→ Motor Rewinding → Electrical wiring → Maintenance
Name of the Units served by the LSP	SMU, private units
Existing Skills of the employee	→ Motor Rewinding → Electrical wiring } Based on experience
Areas in which training is required	→ Motor Rewinding + Alternator → VFD maintenance
Signature	

22/11/2020





LSP Data Collection Format for Sikkim Dairy Cluster	
Name of the Local Service Provider(LSP)	Krishna mandal
Address	Tadlong, Gangtok
Contact Person Name	Krishna Mandal
Designation	-
Mobile No	9434410064
Email ID	-
No of years in existence	30
No of Employees currently working	1
Technology/ Service Provided	→ Dg set maintenance → Mechanical vehicle maintenance
Name of the Units served by the LSP	SMU HO unit Gangtok
Existing Skills of the employee	→ maintenance
Areas in which training is required	→ Dg engine set

Signature Krishna